Author Index

Volume 91, July 12–December 13/27, 2002

Aalders MC, 945
Abe J-i, 4
Acharya AS, 626
Agrapart M, 899
Ahlers BA, 1198
Ahmad IM, 1038
Ahmad S, 696
Ahmed Z, 696
Akira S, 441
Albayya FP, 525
Alexander RW, 1160
Allayee H, 120
Allen PD, 181
Alonso A, 899
Álvarez Á, 1142
Alvarez-Arroyo MV, 202
Anand-Srivastava MB, 247
Andrews G, 292
Anisimov SV, 189
Antoons G, 1023
Antzelevitch C, 1114
Anwar KN, 398
Arai AE, 1092
Archer SL, 478
Arcucci O, 1190
Arnal J-F, 759
Arthur PG, 601
Asada Y, 1063
Asmis R, 712
Auchampach JA, 165
Aziz S, 25

Baba A, 90
Bader DM, 761
Baines CP, 712
Baker JE, 300
Balke CW, 276
Bao C, 806
Bao W, 790
Barateau V, 441
Barker RJ, 556
Barr A, 478
Barrett TJ, 741
Basseri B, 570
Baumbach GL, 931
Bayard F, 759
Begley U, 32, 143
Beilfuß A, 1056
Bendeck MP, 861
Bennett MR, 915
Benson DW, 656
Berk BC, 4, 712
Bers DM, 594
Betancor G, 830
Beuckelmann DJ, 421
Beyer EC, 104
Bhatia V, 696
Bhatnagar A, 240
Bilancio A, 1190
Birnbaumer L, 1
Bishop-Bailey D, 210
Bito V, 1023
Black RG Jr, 165
Blackburn B, 278
Bloodsworth A, 375
Boerrigter G, 1127
Bogdanov KY, e3
Boheler KR, 189
Böhle T, 421
Boittin F-X, 1168
Bolli R, 165, 240
Borg TK, 888
Borgers M, 970
Borges R, 830
Boriboun C, 719
Borton AR, 525
Bottiglieri T, 931
Brandes RP, 173
Brandt K, 1056
Brandt MC, 421
Brette F, 315
Brink PR, 104
Brioso MA, 830
Brodde O-E, 1056
Brown JH, 640
Bruemmer D, e35
Brugada J, 1114
Brugada P, 1114
Brugada R, 1114
Brunn GJ, 1135
Buckley JR, 547
Bueno OF, 776
Burnett JC Jr, 1127
Bursac N, e45
Buscemi N, 509
Busse R, 749
Bustos M, 1135
Buxton ILO, 292

Cai S, 1089
Camacho M, 830
Campos AH, 999
Canty JM Jr, 970
Cao W, 806
Capogrossi MC, e4
Caramelo C, 202
Cardona C, 25
Carmona R, 158
Carpenter MK, 501
Casanello P, 127
Castilla MA, 202
Cataliotti A, 1127
Ceacareanu B, 390
Chai Q, 1070
Chambliss KL, 814
Chandler MP, 278
Chang Y, 390
Channon KM, 1089
Chen HH, 1127
Chen SRW, 218
Chen X, 517
Cheng X, 610
Cheranov SY, 610
Chiariello M, 1190
Chien S, 769
Cho A, 845
Choi B-R, 339
Choudhri T, 907
Chvatchko Y, 441
Clark SR, 375
Clergue M, 441
Cleutjens JPM, 577
Coetzee WA, 232
Coles B, 375
Connolly ES Jr, 907
Cook SA, 559
Coppola C, 1190
Corbaz A, 441
Corfield V, 704
Costell M, 158
Costello-Boerrigter LC, 1127
Coussin F, 151
Cowley AW Jr, 487
Cowling RT, 1119
Crapo JD, 1031
Crespo MS, 681
Cross AR, 375
Crow MT, 46, 183
Curcio A, 1190
Czyz J, 189

Da Costa A, e21
Danson EJF, 1089
D'Arcangelo D, e4
Davison F, e13
Davisson RL, 1038
De Keulenaer GW, 689
de Lange W, 704
de Vries MR, 577, 945
DeBarros M, 633
Deem S, 626
Dejam A, 470
Delmar M, 85
Demchenko IT, 1031
Demer LL, 570
Denjoy I, e21
Depre C, 1007
Dernbac E, 38
Deudero JJP, 202
Dhore CR, 577
Díaz ME, 585
Dickhout JG, 487
Didion LA, 938
Didion SP, 938
Dietz R, 782
Dikalov SI, 1160
Dimmeler S, 38, 837
Dixit M, 390
Dorn GW II, 741
Drummond GR, 54
Duriez M, 441
Duschin A, 470
Dusting GJ, 54
Dyck JRB, 478

E Shuyu, 610
Efros L, 907
Egger M, 323
Eisner DA, 585, 979
Emanueli C, 346
Ens K, 226
Erckenbrecht J, 470
Erdel M, e13
Escobar AL, 414
Esplugues JV, 1142
Evans AM, 1168
Eyries M, 899

Falco M, 1190
Fallavollita JA, 970
Faraci FM, 7, 938
Farrell EF, 1015
Fässler R, 158
Feelisch M, 470
Fegan PE, 938
Feng X, e35
Fernández-Avilés FJ, 681
Ferrario CM, 633
Fissllthaler B, 837
Flashman E, 704
Fleck E, e35
Fleming I, 749, 837
Flockerzi V, 70
Földes G, 434
Foldes JK, 353
Förstermann U, 837
Foster DB, 509
Francis SC, 633
Frasch M, 457
Freedman JE, 371
Freeman BA, 375
Freichel M, 70
Fuentes L, 681
Fujimoto M, 1160
Fukai T, 1160
Funk CD, 120
Furukawa S, 517

Gaetano C, e4
Galione A, 1168
Galis ZS, 852
Galper JB, 32, 143
Gaussin V, 1007
Ge Z-D, 165
Geppetti P, 346
Gepstein A, 659
Gepstein L, 659, 866
Ghaleb B, 1007
Gharini P, 470
Gibbons GH, 999
Gibson LL, 814
Ginsburg KS, 594
Gladwin MT, 626
Godin D, 852
Goetze S, e35
Goldhaber JI, 90
Goldman B, 517
Goldschmidt-Clermont PJ, 798
Gómez AM, 323
Gomez CA, 255
Gómez JF, 830
Gong X, 640
González-Alonso J, 1046
González-Iriarte M, 158
González-Pacheco FR, 202
Gores GJ, 1135
Gourdie RG, 556
Graf K, e35
Gray S, 382
Greenberg BH, 1119
Gregg D, 798
Griendling KK, 406
Grimbergen JM, 945
Gross GJ, 186
Guan Y-Y, e28
Guicheney P, e21
Gulluyan LM, 54
Guo J, 532
Guo Y, 165
Gurantz D, 1119
Gussak I, 1114
Gustafsson E, 158
Gutterman DD, 1070
Györke S, 414

Haendeler J, 38, 712

Hahn HS, 741
Hahner LD, 814
Hall RA, 672
Hall W, 907
Hamet P, 915
Hammond WP, 25
Han T, 90
Han W, 790
Hansmann G, 782
Hansson GK, 281
Harfeldt E, 907
Haromy A, 478
Harry G, 478
Haruna T, 232
Haruno A, 1063
Hase M, 1007
Hasegawa M, 923
Hashimoto K, 478
Haskard DO, 696
Hassid A, 390
Hauck L, 782
Havemann K, e1
Havenga MJ, 945
Haworth RA, 1015
Haze K, 112
He H, e28
He J-Q, 451
Heaton DA, 1089
Heinroth-Hoffmann I, 1056
Heinzel FR, 1023
Henderson SA, 90
Henrion D, 1183
Hermenegildo C, 1142
Hernández M, 681
Herring BP, 1151
Heusch G, 470, 863
Hill JM, 1092
Hillgartner FB, 32
Hilty KC, 741
Hippenstiel S, 618
Hittinger L, 1007
Hiwada K, 427
Hla T, 210
Hocke A, 618
Hoefen RJ, 712
Hoffman JIE, 662
Hoffmann J, 38
Hoggatt AM, 1151
Hojo Y, 712
Holzknecht ZE, 1135
Hong KE, 255
Hooks DA, 331
Hool LC, 601
Hoorntje TM, e21
Horie M, 232
Houser SR, 517
Hsieh C-M, 382
Hsu AK, 186
Hsueh WA, e35
Hu Y, e13
Huang Jian, 733
Huang Judy, 907
Huisman LGM, 945
Hunter PJ, 331
Huntley BK, 1127
Hwang DW, 135
Hwang J, 570
Hwang PM, 565

Ideker RE, 733
Ihionkhan CE, 814
Ilves M, 434
Indolfi C, 1190
Ingber DE, 877
Iravanian S, e45
Iruela-Arispe L, 143
Ishibashi H, 923
Ishida A, 25
Isoda K, 77
Issekutz AC, 1142
Ito M, 953
Itskovitz-Eldor J, 659
Ivan E, 852
Izu LT, 276

Jaggar JH, 610
Jain MK, 382
Jiang D, 218
Jiang MT, 1015
Jiménez S, 202
Jo S-H, 46
Johnson AG, 652
Johnson C, 852, 1160
Johnson PL, 733
Jones WK, 165
Jono S, 9
June HH, 547
Jung F, 38
Justice RK, 733

Kaiser RA, 292
Kajimura M, e55
Kamezawa Y, 77
Kamp TJ, 451
Kashiwagi Satoshi, e55
Kashiwagi Shiro, 112
Kassik KA, 689
Katagi M, 9
Katovich MJ, 633
Kawakami A, 263
Kaye DM, 1198
Kehat I, 659
Keller BB, 353
Kelm M, 470
Kerr ME, 626
Kim J-U, 626
Kinderlerer A, 696
Kintscher U, e35
Kirby ML, 87
Kirshenbaum LA, 226
Kishore R, 307
Kitami Y, 427
Kleinbongard P, 470
Kleinman LH, 1070
Klingbeil C, 907
Kobayashi S, 112, 953
Kockskämper J, 553
Kodani E, 240
Kohlstedt K, 749
Komukai K, 315
Kong D, 32, 143
Kovacic H, 798
Koyama H, 9
Kozasa T, 961
Kraemer R, 494
Krishnan SPR, 1089
Krisp M, 618
Krülli M, 618
Kucera JP, 1176
Kudej RK, 1007
Kuriyama S, 112
Kurokawa T, 112
Kurose H, 961
Kusuhara M, 77
Kusuoka H, 662
Kuypers KL, 1135

Lakatta EG, e3
Lamers WH, 93
Lamfers MLM, 945
Lamont C, 454
Lan X-J, e28
Lang JA, 1038
Lardenoye JHP, 577
Lauer T, 470
Law RE, e35
Layne MD, 382
Lazartigues E, 1038
Leblais V, 46
Leccia A, 1190
Lecomte-Raclet L, 441
Lee M-E, 382
Lee RT, 689
Lee TJF, 62
Leffler CW, 610
Lefkowitz RJ, 672
LeGrice IJ, 331
Leineweber K, 1056
Lentz SR, 931
Leosco D, 1190
Lerner DL, 640
Lévy BI, 441, 1183
Lewis MJ, 375
Li Hongwei, 1070
Li Huige, 837
Li Y, 247
Li Z, 704
Liao JK, 17
Libby P, 281
Lidington EA, 696
Lin M-J, e28
Lindner M, 421
Liu S-Q, 240
Liu T, 339
Liu Y, 1070
Lokuta AJ, 1015
Lopes NHM, 798
Losordo DW, 307
Loufrani L, 1183
Lowenstein CJ, 806
Löwik CWGM, 577
Luedemann C, 307
Lupoglazoff J-M, e21
Lusis AJ, 120
Lyon C, e35

Ma Y, 1160
Machado JD, 830
Mack MM, 719
Mack W, 907
Madeddu P, 346
Maemura K, 382
Magid R, 852
Malik AB, 70, 398
Mallat Z, 441
Manabe I, 1103
Manjula BN, 626
Mankoff R, 696
Mann DL, 988
Mannens MMAM, e21
Margulies KB, 517
Marks JD, 719
Marreez Y, 741
Marsden SG, 331
Maruyama Y, 961
Marx N, 373
Masaki I, 923
Mason JC, 696
Matsuda Takehisa, 1063
Matsuda Toshio, 90
Matsuzaki M, 953
Mayr M, e13
Mazer SP, 135, 1085
McCulloch A, 888
Mehrabian M, 120
Mehta D, 70
Mendelsohn ME, 814
Metzger JM, 255, 525
Metzler B, e13
Mian OY, 565
Michelakis ED, 478
Michele DE, 255
Mikawa T, 761
Milia AF, 346
Minamoto K, 135
Miwa S, 112, 953
Mizukami Y, 112, 953
Mocco J, 907
Mogami K, 112, 953
Mohan RM, 1089
Moldovan NI, e1
Molkentin JD, 776
Moolman-Smook J, 704
Moorman AFM, 93
Mori K, 9
Mori T, 487
Morita H, 278
Moroi M, 77
Moustakas A, e35
Mubagwa K, 1023
Müller-Esterl W, 749
Mungai PT, 719
Muñoz-Chápuli R, 158
Muro AF, 633
Murphree SS, 165
Murphy AM, 449
Murray J, 25
Murray KT, 540

Nagai R, 273, 1103
Nagao T, 961
Najjar SM, 360
Nakagawa K, 923
Nakajima K, 263
Nakamura M, 427
Nakamura TY, 232
Nakao F, 112, 953
Nanthakumar K, 733
Nattel S, 790
Nearing BD, 727
Neverova I, 509
Newton JC, 733
Nho W, 339
Nieto ML, 681
Niggli E, 323
Ninomiya T, 232
Nishida M, 961
Nishida T, 1063
Nishikawa K, 77
Nishizawa Y, 9
Nixon GF, 151
Norman AW, 17
Northcott CA, 360
Noser JA, 1127
Nsair A, 478

O'Donnell VB, 375
Ohsuzu F, 77
Okada M, 135
Okano S, 923
Okuno Y, 9
Okura T, 427
Olsen DB, 1046
Olson KE, 135
O'Neill SC, 585
Onimaru M, 923
Orchard CH, 315
Orlic D, 1092
Orlov SN, 915
Osborne TF, 32

Osinska H, 741
Otani H, 232
Oury TD, 1031
Oxhorn BC, 292

Pagano PJ, 798, 1160
Paravicini TM, 54
Parhami F, 570
Paria BC, 70
Park H-J, 32, 143
Parker KK, e45
Parnell MM, 1198
Pascarel C, 315
Patel HH, 186
Patel RP, 626
Patel Y, 25
Paterson DJ, 1089
Patino WD, 565
Peart JN, 186
Peng J, 1119
Pereira DS, 202
Petrich BG, 640
Philipson KD, 90
Piacentino V III, 517
Piantadosi CA, 1031
Pieske B, 553
Pikkarainen S, 434
Pinna A, 346
Pinsky DJ, 135, 907, 1085
Piuhola J, 434
Platt JL, 1135
Plummer TB, 1135
Police S, 501
Pollman MJ, 999
Pönicke K, 1056
Popilskis S, 907
Porzig H, 323
Postma AV, e21
Poy MN, 360
Prabhu SD, 165
Preik M, 470
Price PA, 547
Pritchard KA Jr, 300
Proud CG, 821
Pshezhetsky AV, 915
Pullan AJ, 331

Qian J-Y, 1063
Quax PHA, 577, 945
Quinn MT, 1160

Rafii S, 25
Rahman A, 398
Rahman S, 25
Raizada MK, 633
Randi AM, 696
Rao N, 501
Rascher W, 618
Rassaf T, 470
Rebeyka I, 478
Rebsamen MC, 17
Redwood C, 704
Reese DE, 761
Regula KM, 226
Reidy MA, 845
Reissner A, 38
Reuter H, 90
Ricousse-Roussanne SL, 441
Riera ARP, 1114
Robbins J, 656, 741
Rocic P, 406
Rodriguez F, 1190
Rodríguez-Puyol D, 806
Rogers JM, 733
Rohr S, 1176
Rollins DL, 733
Rosenzweig A, 559
Ross RS, 90
Rössig L, 837
Roth BA, 278
Rudy Y, 1176
Ruskoaho H, 434
Ryan MJ, 938
Rysä J, 434

Sabbah HN, 278
Sabri A, 532
Sadoshima J, 1007
Saffitz JE, 640
Saito Yasushi, 1063
Saito Yuji, 712
Sakaguchi T, 135
Salama G, 339
Salis MB, 346
Saltin B, 1046
Sanz M-J, 1142
Sata M, 273
Sato M, 112
Saura M, 806
Savidge GF, 25
Schmeck B, 618
Schönbeck U, 281
Schroder EA, 353
Schulz R, 470, 863
Schulze PC, 689
Schumacker PT, 719, 982
Schütte H, 618
Schwaller B, 323
Scott RH, 151
Sebillon P, e21
Seeger W, 618
Sellers K, 633
Selvakumar B, 798
Senior RM, 852
Seshiah PN, 406
Seybold J, 618
Seyrantepe V, 915
Sham JSK, 649
Shannon TR, 594
Shaposhnik Z, 120
Shaul PW, 814
Shen W, 540
Shi Yang, 300
Shi Yi, 652
Shih W, 120
Shimizu W, 1114
Shimokado K, 263
Shin H-G, 540
Shindo T, 1103
Shinmura K, 240
Shioi A, 9
Shipley JM, 852
Shirao S, 112, 953
Shirasuna K, 923
Shoghi F, 749
Short J, 532
Shyy JY-J, 769
Si M-L, 62
Sigmund CD, 931, 938
Silvestre J-S, 441
Simon GM, 1151
Sinnayah P, 1038
Sipido KR, 1023
Smaill BH, 331
Smith WM, 733
Sobel M, 25
Sobrevia L, 127
Somlyo AV, 83
Soubrier F, 899
Sperelakis N, 985
Spinale FG, 1082
Spira A, 659
Spitz DR, 1038
Spyridopoulos I, 307
Sreejayan N, 390
Srivastava S, 240
Stacca T, 346
Staels B, e35
Stanley WC, 278
Steele DS, 315
Steinberg SF, 532
Strand K, 25
Su J, 300
Sueishi K, 923
Suematsu M, e55
Sugimoto Y, 961
Sumners C, 633
Sun C, 633
Sun J, 17
Sussman MA, 888
Suttorp N, 618
Suzuki Gen, 970
Suzuki George, 278
Suzuki M, 112
Swenson ER, 626
Szokodi I, 434

Tada N, 77
Takano M, 232
Takata Y, 427
Tanabe S, 961
Tanaka A, 263
Tang D, 143
Tang X-L, 240
Tang Y, 1160
Tanii M, 923
Tanimoto T, 712
Taniyama Y, 406
Taurin S, 915
Tavi P, 434
Tcheranova D, 610
Tedgui A, 441
Terata K, 1070
Terentyev D, 414
Thébaud B, 478
Thibault P, 915
Thomas SA, 970
Tinney JP, 353
Tintut Y, 570
Tiruppathi C, 70
Tobelem G, 441
Tobita K, 353
Todoroki-Ikeda N, 112, 953
Tokola H, 434
Tomlinson KA, 331
Torella D, 1190
Tóth M, 434
Toyokawa T, 741
Trafford AW, 979
Tran V, 1119
Tremblay T-L, 915
Trevisani M, 346
True AL, 398
Tsuruda T, 1127
Tung L, e45
Turner JH, 961
Tweddell JS, 300
Tweedie D, 189

Ueno H, 1063
Urbich C, 837
Ushio-Fukai M, 1160

Valdivia HH, 414, 1015
Valiunas V, 104
Valppu L, 406
van Bockel JH, 577
Van Eyk JE, 509
van Hinsbergh VWM, 577, 945
Vassort G, 323
Vasudevan SS, 798
Vatner SF, 1007
Vecchione C, 173
Verrier RL, 727
Vexler V, 907
Viatchenko-Karpinski S, 414
Vinogradova TM, e3
Vogel SM, 70
Volders PGA, 1023
von Harsdorf R, 782
Voutilainen-Myllylä S, 434
Voyno-Yasenetskaya TA, 398

Wada T, 961
Wagner T, 1007
Wakino S, e35
Walcott GP, 733
Wang CY, 135
Wang G-L, e28
Wang Li, 1007
Wang Lijun, 821
Wang PH, 46
Wang W, 999
Wang X, 640
Wang X-P, 120
Wang X-R, e28
Wang Y, 640
Wang Z, 790
Warner TD, 210
Watanabe M, 382
Watkins H, 704
Watts SW, 360
Waypa GB, 719
Weber DS, 406
Wenger RM, 202
Westfall MV, 255, 525
Wier WG, 454
Wijelath ES, 25
Wilde AAM, e21
Williams CP, 540
Williams J, 1135
Williamson MK, 547
Wise A, 151
Witzenrath M, 618
Wludyka B, 1056
Wobus AM, 189
Wolff A, 278
Wolff MR, 1015
Wong J, 120
Wu X, 478

Xi L, e2
Xiao B, 218
Xiao R-P, 46
Xie L-H, 232
Xu C, 501
Xu Q, 577
Xu Qingbo, e13
Xuan Y-t, 240

Yagüe S, 202
Yamamoto K, 712
Yan S-F, 135
Yan Z-Q, 281
Yang H, 633
Yang H-T, 189
Yang Z, 315
Yang Z-H, 427

Ye RD, 398
Yi J, 540
Yin L, 32
Yonemitsu Y, 923
Yoshida H, 232
Yoshida Masayuki, 263
Yoshida Mikoto, 77
Yoshikawa Y, 135
Yoshimura Y, e55
Yoshioka J, 689
Yu H, 32
Yu X, 1007
Yussman MG, 741

Zaffran S, 457
Zajac A, 1007
Zalewski A, 652
Zaragoza C, 806
Zeiher AM, 38, 837
Zhang C, 300
Zhang L, 218
Zhang Y, 907
Zhou J, 540
Zimmerman MC, 1038

Subject Index

Volume 91, July 12–December 13/27, 2002

A

Accelerated atherosclerosis
Accelerated Atherosclerosis and Calcification in Vein Grafts: A Study in APOE*3 Leiden Transgenic Mice, 577

ACE secretase
CK2 Phosphorylates the Angiotensin-Converting Enzyme and Regulates Its Retention in the Endothelial Cell Plasma Membrane, 749

Acidosis
Acidification Prevents Endothelial Cell Apoptosis by Axl Activation, e4

Action potential conduction
Localization of Sodium Channels in Intercalated Disks Modulates Cardiac Conduction, 1176

γ-Adducin
Hypertension-Linked Decrease in the Expression of Brain γ-Adducin, 633

Adenosine receptors
Gene Dosage-Dependent Effects of Cardiac-Specific Overexpression of the A_3 Adenosine Receptor, 165

Adenovirus
Gene Transfer of the Urokinase-Type Plasminogen Activator Receptor-Targeted Matrix Metalloproteinase Inhibitor TIMP-1.ATF Suppresses Neointima Formation More Efficiently Than Tissue Inhibitor of Metalloproteinase-1, 945

ADP ribosylation
Inactivation of Enhanced Expression of G_i Proteins by Pertussis Toxin Attenuates the Development of High Blood Pressure in Spontaneously Hypertensive Rats, 247

Adrenergic
Regulation of G Protein-Coupled Receptor Signaling by Scaffold Proteins, 672

α_1-Adrenergic receptors
$G\alpha_{12/13}$ Mediates α_1-Adrenergic Receptor-Induced Cardiac Hypertrophy, 961

β-Adrenergic receptors
Decreasing Cellular Hydrogen Peroxide With Catalase Mimics the Effects of Hypoxia on the Sensitivity of the L-Type Ca^{2+} Channel to β-Adrenergic Receptor Stimulation in Cardiac Myocytes, 601
Ventricular Hypertrophy Plus Neurohumoral Activation Is Necessary to Alter the Cardiac β-Adrenoceptor System in Experimental Heart Failure, 1056

α_1-Adrenoceptors
α_1-Adrenoceptor-Mediated Breakdown of Phosphatidylinositol 4,5-Bisphosphate Inhibits Pinacidil-Activated ATP-Sensitive K^+ Currents in Rat Ventricular Myocytes, 232

β_2-Adrenoceptor
Phosphatidylinositol 3-Kinase Functionally Compartmentalizes the Concurrent G_s Signaling During β_2-Adrenergic Stimulation, 46

Adrenomedullin
Adrenomedullin Reduces Endothelial Hyperpermeability, 618

Akt
$G\alpha_q$ and $G\beta\gamma$ Regulate PAR-1 Signaling of Thrombin-Induced NF-κB Activation and ICAM-1 Transcription in Endothelial Cells, 398
Phosphatidylinositol 3-Kinase: A Key Regulator of Vascular Tone?, 273

Aldose reductase
Aldose Reductase Is an Obligatory Mediator of the Late Phase of Ischemic Preconditioning, 240

Alkaline phosphatase
Induction of Bone-Type Alkaline Phosphatase in Human Vascular Smooth Muscle Cells: Roles of Tumor Necrosis Factor-α and Oncostatin M Derived From Macrophages, 9

Alternans
Alternans Goes Subcellular: A "Disease" of the Ryanodine Receptor?, 553
Depressed Ryanodine Receptor Activity Increases Variability and Duration of the Systolic Ca^{2+} Transient in Rat Ventricular Myocytes, 585

Amino acids
Reduced Myocardial and Systemic L-Arginine Uptake in Heart Failure, 1198

Amperometry
Hydralazine Reduces the Quantal Size of Secretory Events by Displacement of Catecholamines From Adrenomedullary Chromaffin Secretory Vesicles, 830

Analysis of covariance
Advice on Statistical Analysis for Circulation Research, 662

Angiogenesis
3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Inhibitors Interfere With Angiogenesis by Inhibiting the Geranylgeranylation of RhoA, 143
Inhibitors of Histone Deacetylation Downregulate the Expression of Endothelial Nitric Oxide Synthase and Compromise Endothelial Cell Function in Vasorelaxation and Angiogenesis, 837
Interleukin-18/Interleukin-18 Binding Protein Signaling Modulates Ischemia-Induced Neovascularization in Mice Hindlimb, 441
Novel Role of $gp91^{phox}$-Containing NAD(P)H Oxidase in Vascular Endothelial Growth Factor-Induced Signaling and Angiogenesis, 1160
Protease-Activated Receptor-2 Stimulates Angiogenesis and Accelerates Hemodynamic Recovery in a Mouse Model of Hindlimb Ischemia, 346

Angiotensin II
Angiotensin II Stimulation of NAD(P)H Oxidase Activity: Upstream Mediators, 406
Determinants of Notch-3 Receptor Expression and Signaling in Vascular Smooth Muscle Cells: Implications in Cell-Cycle Regulation, 999
Tumor Necrosis Factor-α-Induced AT_1 Receptor Upregulation Enhances Angiotensin II-Mediated Cardiac Fibroblast Responses That Favor Fibrosis, 1119

Angiotensin-converting enzyme
CK2 Phosphorylates the Angiotensin-Converting Enzyme and Regulates Its Retention in the Endothelial Cell Plasma Membrane, 749
Phorbol Ester Induction of Angiotensin-Converting Enzyme Transcription Is Mediated by Egr-1 and AP-1 in Human Endothelial Cells via ERK1/2 Pathway, 899

Anisotropy
Cardiac Microstructure: Implications for Electrical Propagation and Defibrillation in the Heart, 331
Cardiomyocyte Cultures With Controlled Macroscopic Anisotropy: A Model for Functional Electrophysiological Studies of Cardiac Muscle, e45

Antibody
Innate and Adaptive Immunity in the Pathogenesis of Atherosclerosis, 281

Antisense oligodeoxyribonucleotides
Transcriptional Control of Cardiac Allograft Vasculopathy by Early Growth Response Gene-1 (Egr-1), 135

Aorta
Osteopontin Plays an Important Role in the Development of Medial Thickening and Neointimal Formation, 77

Apelin
Apelin, the Novel Endogenous Ligand of the Orphan Receptor APJ, Regulates Cardiac Contractility, 434

Apoptosis
Acidification Prevents Endothelial Cell Apoptosis by Axl Activation, e4
Apoptosis and Cellular Activation in the Pathogenesis of Acute Vascular Rejection, 1135
Cooperation Between Secretory Phospholipase A_2 and TNF-Receptor Superfamily Signaling: Implications for the Inflammatory Response in Atherogenesis, 681
Hypoxia, BNip3 Proteins, and the Mitochondrial Death Pathway in Cardiomyocytes, 183
Inducible Expression of BNIP3 Provokes Mitochondrial Defects and Hypoxia-Mediated Cell Death of Ventricular Myocytes, 226

Inhibition of Hypoxia-Induced Apoptosis by Modulation of Retinoblastoma Protein-Dependent Signaling in Cardiomyocytes, 782
Proteome Analysis and Functional Expression Identify Mortalin as an Antiapoptotic Gene Induced by Elevation of $[Na^+]_i/[K^+]_i$ Ratio in Cultured Vascular Smooth Muscle Cells, 915
Reduced Apoptosis and Increased Lesion Development in the Flow-Restricted Carotid Artery of $p75^{NTR}$-Null Mutant Mice, 494

L-Arginine
Intrauterine Growth Retardation Is Associated With Reduced Activity and Expression of the Cationic Amino Acid Transport Systems y^+/hCAT-1 and y^+/hCAT-2B and Lower Activity of Nitric Oxide Synthase in Human Umbilical Vein Endothelial Cells, 127

Arrestin
Regulation of G Protein-Coupled Receptor Signaling by Scaffold Proteins, 672

Arrhythmia
Absence of Calsequestrin 2 Causes Severe Forms of Catecholaminergic Polymorphic Ventricular Tachycardia, e21
Brugada Syndrome: A Decade of Progress, 1114

Arterial calcification
SB 242784, a Selective Inhibitor of the Osteoclastic V-H^+-ATPase, Inhibits Arterial Calcification in the Rat, 547

Arteriosclerosis
PPARγ and Vascular Inflammation: Adding Another Piece to the Puzzle, 373

Artery
Evoked and Spontaneous Purinergic Junctional Ca^{2+} Transients in Rat Small Arteries, 454
Phosphoinositide 3-Kinase Mediates Enhanced Spontaneous and Agonist-Induced Contraction in Aorta of Deoxycorticosterone Acetate-Salt Hypertensive Rats, 360

Atherosclerosis
Alteration in Endothelial Estrogen Receptor Expression: A Potential Key of Vasculoprotection by Estrogens?, 759
Atorvastatin Attenuates Remnant Lipoprotein-Induced Monocyte Adhesion to Vascular Endothelium Under Flow Conditions, 263
Both Donor and Recipient Origins of Smooth Muscle Cells in Vein Graft Atherosclerotic Lesions, e13
Cooperation Between Secretory Phospholipase A_2 and TNF-Receptor Superfamily Signaling: Implications for the Inflammatory Response in Atherogenesis, 681
Diverse Origin of Intimal Cells: Smooth Muscle Cells, Myofibroblasts, Fibroblasts, and Beyond?, 652
Identification of 5-Lipoxygenase as a Major Gene Contributing to Atherosclerosis Susceptibility in Mice, 120
Intimal Smooth Muscle Cells as a Target for Peroxisome Proliferator-Activated Receptor-γ Ligand Therapy, 210
Nitrolinoleate Inhibits Superoxide Generation, Degranulation, and Integrin Expression by Human Neutrophils: Novel Antiinflammatory Properties of Nitric Oxide-Derived Reactive Species in Vascular Cells, 375
Osteopontin Plays an Important Role in the Development of Medial Thickening and Neointimal Formation, 77
Smad2 Mediates Transforming Growth Factor-β Induction of Endothelial Nitric Oxide Synthase Expression, 806
Statin-Induced Expression of Decay-Accelerating Factor Protects Vascular Endothelium Against Complement-Mediated Injury, 696
Targeted Disruption of the Matrix Metalloproteinase-9 Gene Impairs Smooth Muscle Cell Migration and Geometrical Arterial Remodeling, 852

Atorvastatin
Statin-Induced Expression of Decay-Accelerating Factor Protects Vascular Endothelium Against Complement-Mediated Injury, 696

ATP-sensitive K^+ channels
α_1-Adrenoceptor-Mediated Breakdown of Phosphatidylinositol 4,5-Bisphosphate Inhibits Pinacidil-Activated ATP-Sensitive K^+ Currents in Rat Ventricular Myocytes, 232

Autonomic
Neuronal Nitric Oxide Synthase Gene Transfer Promotes Cardiac Vagal Gain of Function, 1089

B

Bafilomycin A_1
Hydralazine Reduces the Quantal Size of Secretory Events by Displacement of Catecholamines From Adrenomedullary Chromaffin Secretory Vesicles, 830

Balloon angioplasty
Physical Training Increases eNOS Vascular Expression and Activity and Reduces Restenosis After Balloon Angioplasty or Arterial Stenting in Rats, 1190

Ballooning heart model
Cardiac Septation: A Late Contribution of the Embryonic Primary Myocardium to Heart Morphogenesis, 93

Bcl-2 proteins
Hypoxia, BNip3 Proteins, and the Mitochondrial Death Pathway in Cardiomyocytes, 183

Bidomain model
Cardiac Microstructure: Implications for Electrical Propagation and Defibrillation in the Heart, 331

Binding domains
Novel Vascular Endothelial Growth Factor Binding Domains of Fibronectin Enhance Vascular Endothelial Growth Factor Biological Activity, 25

Blood pressure
Inactivation of Enhanced Expression of G_i Proteins by Pertussis Toxin Attenuates the Development of High Blood Pressure in Spontaneously Hypertensive Rats, 247
Superoxide Mediates the Actions of Angiotensin II in the Central Nervous System, 1038

BNip3/BNip3L/Nix
Hypoxia, BNip3 Proteins, and the Mitochondrial Death Pathway in Cardiomyocytes, 183

Bone resorption
SB 242784, a Selective Inhibitor of the Osteoclastic V-H^+-ATPase, Inhibits Arterial Calcification in the Rat, 547

Brain
Superoxide Mediates the Actions of Angiotensin II in the Central Nervous System, 1038

Brain ischemia
HuEP5C7 as a Humanized Monoclonal Anti-E/P-Selectin Neurovascular Protective Strategy in a Blinded Placebo-Controlled Trial of Nonhuman Primate Stroke, 907

Brain natriuretic peptide
Bioactive Peptide Signaling Within the Myocardial Interstitium and the Matrix Metalloproteinases, 1082

C

c-Jun N-terminal kinase
c-Jun N-Terminal Kinase Activation Mediates Downregulation of Connexin43 in Cardiomyocytes, 640
JNK Bond Regulation: Why Do Mammalian Hearts Invest in Connexin43?, 556

c-Jun NH_2-terminal kinase
$G\alpha_{12/13}$ Mediates α_1-Adrenergic Receptor-Induced Cardiac Hypertrophy, 961

Ca^{2+} cycling
Quantitative Assessment of the SR Ca^{2+} Leak-Load Relationship, 594

Ca^{2+} release
Enhanced Basal Activity of a Cardiac Ca^{2+} Release Channel (Ryanodine Receptor) Mutant Associated With Ventricular Tachycardia and Sudden Death, 218

Ca^{2+} sensitization
Involvement of Src Family Protein Tyrosine Kinases in Ca^{2+} Sensitization of Coronary Artery Contraction Mediated by a Sphingosylphosphorylcholine-Rho-Kinase Pathway, 953

Ca^{2+}-sensitive K^+ channels
Carbon Monoxide Dilates Cerebral Arterioles by Enhancing the Coupling of Ca^{2+} Sparks to Ca^{2+}-Activated K^+ Channels, 610

Calcifying vascular cells
High-Density Lipoprotein Regulates Calcification of Vascular Cells, 570

Calcium
Cardiac Dysfunction in Hypertrophic Cardiomyopathy Mutant Tropomyosin Mice Is Transgene-Dependent, Hypertrophy-Independent, and Improved by β-Blockade, 255
Depressed Ryanodine Receptor Activity Increases Variability and Duration of the Systolic Ca^{2+} Transient in Rat Ventricular Myocytes, 585
Functional Compartmentation of Endothelial P2Y Receptor Signaling, 292

Hypoxic Pulmonary Vasoconstriction: Ups and Downs of Reactive Oxygen Species, 649
Na^+-Ca^{2+} Exchange Activity Is Localized in the T-Tubules of Rat Ventricular Myocytes, 315
Nicotinic Acid Adenine Dinucleotide Phosphate Mediates Ca^{2+} Signals and Contraction in Arterial Smooth Muscle via a Two-Pool Mechanism, 1168
p21-Activated Kinase Increases the Calcium Sensitivity of Rat Triton-Skinned Cardiac Muscle Fiber Bundles via a Mechanism Potentially Involving Novel Phosphorylation of Troponin I, 509
Spatial and Temporal Inhomogeneities During Ca^{2+} Release From the Sarcoplasmic Reticulum in Pig Ventricular Myocytes, 1023

Calcium signaling
TRPC4 Knockout Mice: The Coming of Age of TRP Channels as Gates of Calcium Entry Responsible for Cellular Responses, 1

Calcium transient
Evoked and Spontaneous Purinergic Junctional Ca^{2+} Transients in Rat Small Arteries, 454

Calcium transport
Increased Exchange Current but Normal Ca^{2+} Transport via Na^+-Ca^{2+} Exchange During Cardiac Hypertrophy After Myocardial Infarction, 323

Calcium-induced calcium release
Luminal Ca^{2+} Controls Termination and Refractory Behavior of Ca^{2+}-Induced Ca^{2+} Release in Cardiac Myocytes, 414

Calsequestrin
Absence of Calsequestrin 2 Causes Severe Forms of Catecholaminergic Polymorphic Ventricular Tachycardia, e21

cAMP signal compartmentation
Phosphatidylinositol 3-Kinase Functionally Compartmentalizes the Concurrent G_s Signaling During β_2-Adrenergic Stimulation, 46

Capillary morphogenesis
Mechanical Signaling and the Cellular Response to Extracellular Matrix in Angiogenesis and Cardiovascular Physiology, 877

Cardiac
p21-Activated Kinase Increases the Calcium Sensitivity of Rat Triton-Skinned Cardiac Muscle Fiber Bundles via a Mechanism Potentially Involving Novel Phosphorylation of Troponin I, 509

Cardiac allografts
Transcriptional Control of Cardiac Allograft Vasculopathy by Early Growth Response Gene-1 (Egr-1), 135

Cardiac arrhythmias
Comparison of Ion-Channel Subunit Expression in Canine Cardiac Purkinje Fibers and Ventricular Muscle, 790

Cardiac contractility
Phosphatidylinositol 3-Kinase Functionally Compartmentalizes the Concurrent G_s Signaling During β_2-Adrenergic Stimulation, 46

Cardiac electrophysiology
Cardiomyocyte Cultures With Controlled Macroscopic Anisotropy: A Model for Functional Electrophysiological Studies of Cardiac Muscle, e45

Cardiac fibroblasts
Brain Natriuretic Peptide Is Produced in Cardiac Fibroblasts and Induces Matrix Metalloproteinases, 1127
Protease-Activated Receptor-1-Mediated DNA Synthesis in Cardiac Fibroblast Is via Epidermal Growth Factor Receptor Transactivation: Distinct PAR-1 Signaling Pathways in Cardiac Fibroblasts and Cardiomyocytes, 532

Cardiac growth
H11 Kinase Is a Novel Mediator of Myocardial Hypertrophy In Vivo, 1007

Cardiac hypertrophy
Dance Band on the *Titanic*: Biomechanical Signaling in Cardiac Hypertrophy, 888
Ras/Erk Signaling Is Essential for Activation of Protein Synthesis by Gq Protein-Coupled Receptor Agonists in Adult Cardiomyocytes, 821

Cardiac induction
Early Signals in Cardiac Development, 457

Cardiac morphogenesis
Microtubule Involvement in the Adaptation to Altered Mechanical Load in Developing Chick Myocardium, 353

Cardiac myocyte
Increased Exchange Current but Normal Ca^{2+} Transport via Na^+-Ca^{2+} Exchange During Cardiac Hypertrophy After Myocardial Infarction, 323

Cardiac myosin binding protein-C
Identification of Novel Interactions Between Domains of Myosin Binding Protein-C That Are Modulated by Hypertrophic Cardiomyopathy Missense Mutations, 704

Cardiac remodeling
Gene Expression in Fibroblasts and Fibrosis: Involvement in Cardiac Hypertrophy, 1103

Cardiac transplantation
Apoptosis and Cellular Activation in the Pathogenesis of Acute Vascular Rejection, 1135

Cardiogenic transcription factors
Early Signals in Cardiac Development, 457

Cardiomyocyte differentiation
Derivation and Potential Applications of Human Embryonic Stem Cells, 866

Cardiomyocytes
Characterization and Enrichment of Cardiomyocytes Derived From Human Embryonic Stem Cells, 501
Differentiation of Pluripotent Embryonic Stem Cells Into Cardiomyocytes, 189

Cardiovascular
Serial Analysis of Gene Expression: Technical Considerations and Applications to Cardiovascular Biology, 565

Carotid artery
Increased Superoxide and Vascular Dysfunction in CuZnSOD-Deficient Mice, 938

Casein kinase 2
CK2 Phosphorylates the Angiotensin-Converting Enzyme and Regulates Its Retention in the Endothelial Cell Plasma Membrane, 749

Catalase
Decreasing Cellular Hydrogen Peroxide With Catalase Mimics the Effects of Hypoxia on the Sensitivity of the L-Type Ca^{2+} Channel to β-Adrenergic Receptor Stimulation in Cardiac Myocytes, 601

Catecholamines
Hydralazine Reduces the Quantal Size of Secretory Events by Displacement of Catecholamines From Adrenomedullary Chromaffin Secretory Vesicles, 830

Caveolae
Functional Compartmentation of Endothelial P2Y Receptor Signaling, 292

CCAAT/enhancer-binding protein
PPARγ and Vascular Inflammation: Adding Another Piece to the Puzzle, 373
Vascular Inflammation Is Negatively Autoregulated by Interaction Between CCAAT/Enhancer-Binding Protein-δ and Peroxisome Proliferator-Activated Receptor-γ, 427

Cell adhesion molecules
Estrogens Inhibit Angiotensin II-Induced Leukocyte-Endothelial Cell Interactions In Vivo via Rapid Endothelial Nitric Oxide Synthase and Cyclooxygenase Activation, 1142
HuEP5C7 as a Humanized Monoclonal Anti-E/P-Selectin Neurovascular Protective Strategy in a Blinded Placebo-Controlled Trial of Nonhuman Primate Stroke, 907

Cell culture
Cardiomyocyte Cultures With Controlled Macroscopic Anisotropy: A Model for Functional Electrophysiological Studies of Cardiac Muscle, e45

Cell cycle
Inhibition of Hypoxia-Induced Apoptosis by Modulation of Retinoblastoma Protein-Dependent Signaling in Cardiomyocytes, 782

Cell cycle-dependent elements
Functionally Novel Tumor Necrosis Factor-α-Modulated CHR-Binding Protein Mediates Cyclin A Transcriptional Repression in Vascular Endothelial Cells, 307

Cell death
Inducible Expression of BNIP3 Provokes Mitochondrial Defects and Hypoxia-Mediated Cell Death of Ventricular Myocytes, 226

Cell migration
Targeted Disruption of the Matrix Metalloproteinase-9 Gene Impairs Smooth Muscle Cell Migration and Geometrical Arterial Remodeling, 852

Targeting Pericellular Proteolysis in Vascular Disease, 861
Cell motility
Nitric Oxide-Induced Motility in Aortic Smooth Muscle Cells: Role of Protein Tyrosine Phosphatase SHP-2 and GTP-Binding Protein Rho, 390
Cell origin
Both Donor and Recipient Origins of Smooth Muscle Cells in Vein Graft Atherosclerotic Lesions, e13
Cell separation
Characterization and Enrichment of Cardiomyocytes Derived From Human Embryonic Stem Cells, 501
Cell therapy
Derivation and Potential Applications of Human Embryonic Stem Cells, 866
Cerebral arteriole
Increased Superoxide and Vascular Dysfunction in CuZnSOD-Deficient Mice, 938
Structure of Cerebral Arterioles in Cystathionine β-Synthase-Deficient Mice, 931
Cerebral artery
Comparison of Sphingosine 1-Phosphate-Induced Intracellular Signaling Pathways in Vascular Smooth Muscles: Differential Role in Vasoconstriction, 151
Cerebral blood flow
Regulation of the Brain's Vascular Responses to Oxygen, 1031
Cerebral circulation
nNOS-Containing Perivascular Nerves: Stranger by the Minute, 7
Cerebral neurogenic vasodilation
α_7-Nicotinic Acetylcholine Receptors on Cerebral Perivascular Sympathetic Nerves Mediate Choline-Induced Nitrergic Neurogenic Vasodilation, 62
cGMP
Brain Natriuretic Peptide Is Produced in Cardiac Fibroblasts and Induces Matrix Metalloproteinases, 1127
Channel activation
Identification of Gating Modes in Single Native Na^+ Channels From Human Atrium and Ventricle, 421
Channel inactivation
Identification of Gating Modes in Single Native Na^+ Channels From Human Atrium and Ventricle, 421
Chloride channel
Deficiency in ClC-3 Chloride Channels Prevents Rat Aortic Smooth Muscle Cell Proliferation, e28
Cholesterol
Functional Compartmentation of Endothelial P2Y Receptor Signaling, 292
Choline
α_7-Nicotinic Acetylcholine Receptors on Cerebral Perivascular Sympathetic Nerves Mediate Choline-Induced Nitrergic Neurogenic Vasodilation, 62
Chromaffin granules
Hydralazine Reduces the Quantal Size of Secretory Events by Displacement of Catecholamines From Adrenomedullary Chromaffin Secretory Vesicles, 830
Chronic hypoxia
Chronic Hypoxia Increases Endothelial Nitric Oxide Synthase Generation of Nitric Oxide by Increasing Heat Shock Protein 90 Association and Serine Phosphorylation, 300
Clinical trial
Inflammatory Mediators and the Failing Heart: Past, Present, and the Foreseeable Future, 988
Collagen synthesis
Tumor Necrosis Factor-α-Induced AT_1 Receptor Upregulation Enhances Angiotensin II-Mediated Cardiac Fibroblast Responses That Favor Fibrosis, 1119
Collar-induced atherosclerosis
Increased NADPH Oxidase Activity, gp91phox Expression, and Endothelium-Dependent Vasorelaxation During Neointima Formation in Rabbits, 54
Complement
Statin-Induced Expression of Decay-Accelerating Factor Protects Vascular Endothelium Against Complement-Mediated Injury, 696
Conduction
High-Resolution Electrophysiological Assessment of Human Embryonic Stem Cell-Derived Cardiomyocytes, 659
Congestive heart failure
Ischemic Protection and Myofibrillar Cardiomyopathy: Dose-Dependent Effects of In Vivo δPKC Inhibition, 741
L-Type Ca^{2+} Channels Gaining Respect in Heart Failure, 451
Connexin
Connexin Diversity: Discriminating the Message, 85
Connexin40
Cardiac Gap Junction Channels Show Quantitative Differences in Selectivity, 104
Connexin43
c-Jun N-Terminal Kinase Activation Mediates Downregulation of Connexin43 in Cardiomyocytes, 640
Cardiac Gap Junction Channels Show Quantitative Differences in Selectivity, 104
Contractility
Apelin, the Novel Endogenous Ligand of the Orphan Receptor APJ, Regulates Cardiac Contractility, 434
Coronary circulation
Peroxynitrite Inhibits Ca^{2+}-Activated K^+ Channel Activity in Smooth Muscle of Human Coronary Arterioles, 1070
Coronary reserve
Hibernating Myocardium: New Answers, Still More Questions!, 863
Coronary stenosis
Hibernating Myocardium: New Answers, Still More Questions!, 863
Coronary vessels
Development of the Coronary Vessel System, 761
Cultured endothelial cells
Adrenomedullin Reduces Endothelial Hyperpermeability, 618
Cyclodextrin
Functional Compartmentation of Endothelial P2Y Receptor Signaling, 292
Cyclooxygenase-2
Intimal Smooth Muscle Cells as a Target for Peroxisome Proliferator-Activated Receptor-γ Ligand Therapy, 210
Cyclosporin A
Cyclophilin-Mediated Pathways in the Effect of Cyclosporin A on Endothelial Cells: Role of Vascular Endothelial Growth Factor, 202
Cylophilin-binding analogs
Cyclophilin-Mediated Pathways in the Effect of Cyclosporin A on Endothelial Cells: Role of Vascular Endothelial Growth Factor, 202
Cytokines
Cooperation Between Secretory Phospholipase A_2 and TNF-Receptor Superfamily Signaling: Implications for the Inflammatory Response in Atherogenesis, 681
High-Density Lipoprotein Regulates Calcification of Vascular Cells, 570
Innate and Adaptive Immunity in the Pathogenesis of Atherosclerosis, 281
Cytoprotection
Cyclophilin-Mediated Pathways in the Effect of Cyclosporin A on Endothelial Cells: Role of Vascular Endothelial Growth Factor, 202
Statin-Induced Expression of Decay-Accelerating Factor Protects Vascular Endothelium Against Complement-Mediated Injury, 696
Cytoskeleton
Defect in Microvascular Adaptation to Chronic Changes in Blood Flow in Mice Lacking the Gene Encoding for Dystrophin, 1183
Mechanical Signaling and the Cellular Response to Extracellular Matrix in Angiogenesis and Cardiovascular Physiology, 877

D

Defibrillation
Cardiac Microstructure: Implications for Electrical Propagation and Defibrillation in the Heart, 331
Delayed preconditioning
Sarcolemmal K_{ATP} Channel Triggers Opioid-Induced Delayed Cardioprotection in the Rat, 186
Deoxycorticosterone acetate-salt hypertension
Phosphoinositide 3-Kinase Mediates Enhanced Spontaneous and Agonist-Induced Contraction in Aorta of Deoxycorticosterone Acetate-Salt Hypertensive Rats, 360

Development
Development of the Coronary Vessel System, 761
Diaminofluorescein
Nonendothelial Source of Nitric Oxide in Arterioles But Not in Venules: Alternative Source Revealed In Vivo by Diaminofluorescein Microfluorography, e55
Differentiation
Characterization and Enrichment of Cardiomyocytes Derived From Human Embryonic Stem Cells, 501
Regulation of Smooth Muscle Cell Differentiation by AT-Rich Interaction Domain Transcription Factors Mrf2α and Mrf2β, 382
Discontinuous conduction
Cardiac Microstructure: Implications for Electrical Propagation and Defibrillation in the Heart, 331
Disease
JNK Bond Regulation: Why Do Mammalian Hearts Invest in Connexin43?, 556
Duchenne muscular dystrophy
Defect in Microvascular Adaptation to Chronic Changes in Blood Flow in Mice Lacking the Gene Encoding for Dystrophin, 1183
Dystrophin
Defect in Microvascular Adaptation to Chronic Changes in Blood Flow in Mice Lacking the Gene Encoding for Dystrophin, 1183

E

E-selectin
HuEP5C7 as a Humanized Monoclonal Anti-E/P-Selectin Neurovascular Protective Strategy in a Blinded Placebo-Controlled Trial of Nonhuman Primate Stroke, 907
Early growth response-1
Transcriptional Control of Cardiac Allograft Vasculopathy by Early Growth Response Gene-1 (Egr-1), 135
Eicosapentaenoic acid
Involvement of Src Family Protein Tyrosine Kinases in Ca^{2+} Sensitization of Coronary Artery Contraction Mediated by a Sphingosylphosphorylcholine-Rho-Kinase Pathway, 953
eIF4E-binding protein-1
Ras/Erk Signaling Is Essential for Activation of Protein Synthesis by Gq Protein-Coupled Receptor Agonists in Adult Cardiomyocytes, 821
Electric field mechanism
An Electric Field Mechanism for Transmission of Excitation Between Myocardial Cells, 985
Electrical mapping
Regional Differences in Ventricular Fibrillation in the Open-Chest Porcine Left Ventricle, 733
Electrophysiology
Cardiac Gap Junction Channels Show Quantitative Differences in Selectivity, 104
Embryonic carcinoma
Differentiation of Pluripotent Embryonic Stem Cells Into Cardiomyocytes, 189
Embryonic germ
Differentiation of Pluripotent Embryonic Stem Cells Into Cardiomyocytes, 189
Embryonic stem
Differentiation of Pluripotent Embryonic Stem Cells Into Cardiomyocytes, 189
High-Resolution Electrophysiological Assessment of Human Embryonic Stem Cell-Derived Cardiomyocytes, 659
Embryonic ventricle
Microtubule Involvement in the Adaptation to Altered Mechanical Load in Developing Chick Myocardium, 353
Endothelial barrier dysfunction
Adrenomedullin Reduces Endothelial Hyperpermeability, 618
Endothelial cell function
TRPC4 Knockout Mice: The Coming of Age of TRP Channels as Gates of Calcium Entry Responsible for Cellular Responses, 1
Endothelial cells
Apoptosis and Cellular Activation in the Pathogenesis of Acute Vascular Rejection, 1135
Fluid Shear Stress Attenuates Hydrogen Peroxide-Induced c-Jun NH_2-Terminal Kinase Activation via a Glutathione Reductase-Mediated Mechanism, 712
Functionally Novel Tumor Necrosis Factor-α-Modulated CHR-Binding Protein Mediates Cyclin A Transcriptional Repression in Vascular Endothelial Cells, 307
Hypoxic Induction of the Hypoxia-Inducible Factor Is Mediated via the Adaptor Protein Shc in Endothelial Cells, 38
Inhibitors of Histone Deacetylation Downregulate the Expression of Endothelial Nitric Oxide Synthase and Compromise Endothelial Cell Function in Vasorelaxation and Angiogenesis, 837
Novel Role of $gp91^{phox}$-Containing NAD(P)H Oxidase in Vascular Endothelial Growth Factor-Induced Signaling and Angiogenesis, 1160
Novel Vascular Endothelial Growth Factor Binding Domains of Fibronectin Enhance Vascular Endothelial Growth Factor Biological Activity, 25
Phosphatidylinositol 3-Kinase: A Key Regulator of Vascular Tone?, 273
Smad2 Mediates Transforming Growth Factor-β Induction of Endothelial Nitric Oxide Synthase Expression, 806
Endothelial nitric oxide synthase
Chronic Hypoxia Increases Endothelial Nitric Oxide Synthase Generation of Nitric Oxide by Increasing Heat Shock Protein 90 Association and Serine Phosphorylation, 300
Inhibitors of Histone Deacetylation Downregulate the Expression of Endothelial Nitric Oxide Synthase and Compromise Endothelial Cell Function in Vasorelaxation and Angiogenesis, 837
Endothelial permeability
Adrenomedullin Reduces Endothelial Hyperpermeability, 618
Endothelial progenitor cells
Interleukin-18/Interleukin-18 Binding Protein Signaling Modulates Ischemia-Induced Neovascularization in Mice Hindlimb, 441
Endothelium
Acidification Prevents Endothelial Cell Apoptosis by Axl Activation, e4
Alteration in Endothelial Estrogen Receptor Expression: A Potential Key of Vasculoprotection by Estrogens?, 759
Defect in Microvascular Adaptation to Chronic Changes in Blood Flow in Mice Lacking the Gene Encoding for Dystrophin, 1183
Estrogen Causes Dynamic Alterations in Endothelial Estrogen Receptor Expression, 814
Estrogens Inhibit Angiotensin II-Induced Leukocyte-Endothelial Cell Interactions In Vivo via Rapid Endothelial Nitric Oxide Synthase and Cyclooxygenase Activation, 1142
Intrauterine Growth Retardation Is Associated With Reduced Activity and Expression of the Cationic Amino Acid Transport Systems y^+/hCAT-1 and y^+/hCAT-2B and Lower Activity of Nitric Oxide Synthase in Human Umbilical Vein Endothelial Cells, 127
Plasma Nitrosothiols Contribute to the Systemic Vasodilator Effects of Intravenously Applied NO: Experimental and Clinical Study on the Fate of NO in Human Blood, 470
Role of Integrins in Endothelial Mechanosensing of Shear Stress, 769
Statin-Induced Expression of Decay-Accelerating Factor Protects Vascular Endothelium Against Complement-Mediated Injury, 696
Tubulovascular Nitric Oxide Crosstalk: Buffering of Angiotensin II-Induced Medullary Vasoconstriction, 487
Withdrawal of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Inhibitors Elicits Oxidative Stress and Induces Endothelial Dysfunction in Mice, 173
Endothelium-dependent vasorelaxation
Increased NADPH Oxidase Activity, gp91phox Expression, and Endothelium-Dependent Vasorelaxation During Neointima Formation in Rabbits, 54
Epidermal growth factor receptors
Protease-Activated Receptor-1-Mediated DNA Synthesis in Cardiac Fibroblast Is via Epidermal Growth Factor Receptor Transactivation: Distinct PAR-1 Signaling Pathways in Cardiac Fibroblasts and Cardiomyocytes, 532
Erythrocytes
Erythrocyte and the Regulation of Human Skeletal Muscle Blood Flow and Oxygen Delivery: Role of Circulating ATP, 1046
Estradiol
Alteration in Endothelial Estrogen Receptor Expression: A Potential Key of Vasculoprotection by Estrogens?, 759
Estrogen
Estrogen Causes Dynamic Alterations in Endothelial Estrogen Receptor Expression, 814

Estrogen receptor α
Estrogen Causes Dynamic Alterations in Endothelial Estrogen Receptor Expression, 814
Estrogen receptor β
Estrogen Causes Dynamic Alterations in Endothelial Estrogen Receptor Expression, 814
Estrogen receptors
Alteration in Endothelial Estrogen Receptor Expression: A Potential Key of Vasculoprotection by Estrogens?, 759
Etanercept
Inflammatory Mediators and the Failing Heart: Past, Present, and the Foreseeable Future, 988
Excitation-contraction coupling
Enhanced Basal Activity of a Cardiac Ca^{2+} Release Channel (Ryanodine Receptor) Mutant Associated With Ventricular Tachycardia and Sudden Death, 218
Luminal Ca^{2+} Controls Termination and Refractory Behavior of Ca^{2+}-Induced Ca^{2+} Release in Cardiac Myocytes, 414
Quantitative Assessment of the SR Ca^{2+} Leak-Load Relationship, 594
The Ca^{2+} Synapse Redo: A Matter of Location, Location, Location, 276
Exercise
Physical Training Increases eNOS Vascular Expression and Activity and Reduces Restenosis After Balloon Angioplasty or Arterial Stenting in Rats, 1190
Expression
Serial Analysis of Gene Expression: Technical Considerations and Applications to Cardiovascular Biology, 565
Extracellular matrix
Brain Natriuretic Peptide Is Produced in Cardiac Fibroblasts and Induces Matrix Metalloproteinases, 1127
Dance Band on the *Titanic*: Biomechanical Signaling in Cardiac Hypertrophy, 888

F

Failure
Involvement of Extracellular Signal-Regulated Kinases 1/2 in Cardiac Hypertrophy and Cell Death, 776
Fate map
Cardiac Septation: A Late Contribution of the Embryonic Primary Myocardium to Heart Morphogenesis, 93
Fatty acids
Short-Term Treatment With Ranolazine Improves Mechanical Efficiency in Dogs With Chronic Heart Failure, 278
Fibroblast growth factor-2
Fibroblast Growth Factor-2 Gene Transfer Can Stimulate Hepatocyte Growth Factor Expression Irrespective of Hypoxia-Mediated Downregulation in Ischemic Limbs, 923
Fibroblasts
Bioactive Peptide Signaling Within the Myocardial Interstitium and the Matrix Metalloproteinases, 1082
Diverse Origin of Intimal Cells: Smooth Muscle Cells, Myofibroblasts, Fibroblasts, and Beyond?, 652
Fibronectin
Novel Vascular Endothelial Growth Factor Binding Domains of Fibronectin Enhance Vascular Endothelial Growth Factor Biological Activity, 25
Fibrosis
Gene Expression in Fibroblasts and Fibrosis: Involvement in Cardiac Hypertrophy, 1103
Finite elements
Cardiac Microstructure: Implications for Electrical Propagation and Defibrillation in the Heart, 331

G

G protein-coupled receptor kinase
Ventricular Hypertrophy Plus Neurohumoral Activation Is Necessary to Alter the Cardiac β-Adrenoceptor System in Experimental Heart Failure, 1056
G proteins
$G\alpha_q$ and $G\beta\gamma$ Regulate PAR-1 Signaling of Thrombin-Induced NF-κB Activation and ICAM-1 Transcription in Endothelial Cells, 398
Inactivation of Enhanced Expression of G_i Proteins by Pertussis Toxin Attenuates the Development of High Blood Pressure in Spontaneously Hypertensive Rats, 247
Role of Sterol Regulatory Element Binding Proteins in the Regulation of $G\alpha_{i2}$ Expression in Cultured Atrial Cells, 32
G_{12} family G proteins
$G\alpha_{12/13}$ Mediates α_1-Adrenergic Receptor-Induced Cardiac Hypertrophy, 961
Gap junctions
Cardiac Gap Junction Channels Show Quantitative Differences in Selectivity, 104
c-Jun N-Terminal Kinase Activation Mediates Downregulation of Connexin43 in Cardiomyocytes, 640
Connexin Diversity: Discriminating the Message, 85
High-Resolution Electrophysiological Assessment of Human Embryonic Stem Cell-Derived Cardiomyocytes, 659
JNK Bond Regulation: Why Do Mammalian Hearts Invest in Connexin43?, 556
Localization of Sodium Channels in Intercalated Disks Modulates Cardiac Conduction, 1176
Gas6/Axl
Acidification Prevents Endothelial Cell Apoptosis by Axl Activation, e4
Gene
Inducible Expression of BNIP3 Provokes Mitochondrial Defects and Hypoxia-Mediated Cell Death of Ventricular Myocytes, 226
Serial Analysis of Gene Expression: Technical Considerations and Applications to Cardiovascular Biology, 565
Gene expression
Apelin, the Novel Endogenous Ligand of the Orphan Receptor APJ, Regulates Cardiac Contractility, 434
Deficiency in ClC-3 Chloride Channels Prevents Rat Aortic Smooth Muscle Cell Proliferation, e28
DNA Microarrays: Implications for Cardiovascular Medicine, 559
H11 Kinase Is a Novel Mediator of Myocardial Hypertrophy In Vivo, 1007
Inhibitors of Histone Deacetylation Downregulate the Expression of Endothelial Nitric Oxide Synthase and Compromise Endothelial Cell Function in Vasorelaxation and Angiogenesis, 837
Gene profiling
Hypertension-Linked Decrease in the Expression of Brain γ-Adducin, 633
Gene regulation
Cell-Specific Regulatory Modules Control Expression of Genes in Vascular and Visceral Smooth Muscle Tissues, 1151
Gene transfer
Local Expression of C-Type Natriuretic Peptide Suppresses Inflammation, Eliminates Shear Stress-Induced Thrombosis, and Prevents Neointima Formation Through Enhanced Nitric Oxide Production in Rabbit Injured Carotid Arteries, 1063
Neuronal Nitric Oxide Synthase Gene Transfer Promotes Cardiac Vagal Gain of Function, 1089
Genes
Osteopontin Plays an Important Role in the Development of Medial Thickening and Neointimal Formation, 77
Genetically altered mice
Increased Superoxide and Vascular Dysfunction in CuZnSOD-Deficient Mice, 938
Knockout Mice for Pharmacological Screening: Testing the Specificity of Na^+-Ca^{2+} Exchange Inhibitors, 90
Genetics
Absence of Calsequestrin 2 Causes Severe Forms of Catecholaminergic Polymorphic Ventricular Tachycardia, e21
Identification of 5-Lipoxygenase as a Major Gene Contributing to Atherosclerosis Susceptibility in Mice, 120
Glycosylation
Determinants of Notch-3 Receptor Expression and Signaling in Vascular Smooth Muscle Cells: Implications in Cell-Cycle Regulation, 999
gp91phox
Increased NADPH Oxidase Activity, gp91phox Expression, and Endothelium-Dependent Vasorelaxation During Neointima Formation in Rabbits, 54

GPCR
Regulation of G Protein-Coupled Receptor Signaling by Scaffold Proteins, 672
Growth factors
Early Signals in Cardiac Development, 457
Vitamin D_3-Upregulated Protein-1 (VDUP-1) Regulates Redox-Dependent Vascular Smooth Muscle Cell Proliferation Through Interaction With Thioredoxin, 689
$G\alpha_{12}$
Role of Sterol Regulatory Element Binding Proteins in the Regulation of $G\alpha_{12}$ Expression in Cultured Atrial Cells, 32

H

H11 kinase
H11 Kinase Is a Novel Mediator of Myocardial Hypertrophy In Vivo, 1007
Heart
Cardiac Dysfunction in Hypertrophic Cardiomyopathy Mutant Tropomyosin Mice Is Transgene-Dependent, Hypertrophy-Independent, and Improved by β-Blockade, 255
Embryogenesis of Transposition of the Great Arteries: A Lesson From the Heart, 87
Gene Dosage-Dependent Effects of Cardiac-Specific Overexpression of the A_3 Adenosine Receptor, 165
Hyperplastic Conotruncal Endocardial Cushions and Transposition of Great Arteries in Perlecan-Null Mice, 158
Involvement of Extracellular Signal-Regulated Kinases 1/2 in Cardiac Hypertrophy and Cell Death, 776
Myofilament Calcium Sensitivity and Cardiac Disease: Insights From Troponin I Isoforms and Mutants, 525
Phosphorylation and Putative ER Retention Signals Are Required for Protein Kinase A-Mediated Potentiation of Cardiac Sodium Current, 540
Heart failure
Abnormal Ca^{2+} Release, but Normal Ryanodine Receptors, in Canine and Human Heart Failure, 1015
c-Jun N-Terminal Kinase Activation Mediates Downregulation of Connexin43 in Cardiomyocytes, 640
Heart Failure and the Ryanodine Receptor: Does Occam's Razor Rule?, 979
L-Type Ca^{2+} Channel Density and Regulation Are Altered in Failing Human Ventricular Myocytes and Recover After Support With Mechanical Assist Devices, 517
Reduced Myocardial and Systemic L-Arginine Uptake in Heart Failure, 1198
Short-Term Treatment With Ranolazine Improves Mechanical Efficiency in Dogs With Chronic Heart Failure, 278
Heart rate
Neuronal Nitric Oxide Synthase Gene Transfer Promotes Cardiac Vagal Gain of Function, 1089
Heart ventricle
L-Type Ca^{2+} Channels Gaining Respect in Heart Failure, 451
Heat shock protein 90
Chronic Hypoxia Increases Endothelial Nitric Oxide Synthase Generation of Nitric Oxide by Increasing Heat Shock Protein 90 Association and Serine Phosphorylation, 300
Heme oxygenase
Carbon Monoxide Dilates Cerebral Arterioles by Enhancing the Coupling of Ca^{2+} Sparks to Ca^{2+}-Activated K^+ Channels, 610
Hemoglobin
Effects of S-Nitrosation and Cross-Linking of Hemoglobin on Hypoxic Pulmonary Vasoconstriction in Isolated Rat Lungs, 626
Hepatocyte growth factor
Fibroblast Growth Factor-2 Gene Transfer Can Stimulate Hepatocyte Growth Factor Expression Irrespective of Hypoxia-Mediated Downregulation in Ischemic Limbs, 923
Heptahelical
Regulation of G Protein-Coupled Receptor Signaling by Scaffold Proteins, 672
Hibernating myocardium
Dissociation of Regional Adaptations to Ischemia and Global Myolysis in an Accelerated Swine Model of Chronic Hibernating Myocardium, 970
Hibernating Myocardium: New Answers, Still More Questions!, 863
High-density lipoproteins
High-Density Lipoprotein Regulates Calcification of Vascular Cells, 570
Histone deacetylase
Inhibitors of Histone Deacetylation Downregulate the Expression of Endothelial Nitric Oxide Synthase and Compromise Endothelial Cell Function in Vasorelaxation and Angiogenesis, 837
Human
Intrauterine Growth Retardation Is Associated With Reduced Activity and Expression of the Cationic Amino Acid Transport Systems y^+/hCAT-1 and y^+/hCAT-2B and Lower Activity of Nitric Oxide Synthase in Human Umbilical Vein Endothelial Cells, 127
JNK Bond Regulation: Why Do Mammalian Hearts Invest in Connexin43?, 556
Human embryonic stem cells
Characterization and Enrichment of Cardiomyocytes Derived From Human Embryonic Stem Cells, 501
Human myocardial sodium channels
Identification of Gating Modes in Single Native Na^+ Channels From Human Atrium and Ventricle, 421
Hydrogen peroxide
Hypoxic Pulmonary Vasoconstriction: Ups and Downs of Reactive Oxygen Species, 649
O_2 Sensing in the Human Ductus Arteriosus: Regulation of Voltage-Gated K^+ Channels in Smooth Muscle Cells by a Mitochondrial Redox Sensor, 478
3-Hydroxy-3-methylglutaryl coenzyme A reductase inhibitors
Atorvastatin Attenuates Remnant Lipoprotein-Induced Monocyte Adhesion to Vascular Endothelium Under Flow Conditions, 263
3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Inhibitors Interfere With Angiogenesis by Inhibiting the Geranylgeranylation of RhoA, 143
Withdrawal of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Inhibitors Elicits Oxidative Stress and Induces Endothelial Dysfunction in Mice, 173
4-Hydroxy-*trans*-2-nonenal
Aldose Reductase Is an Obligatory Mediator of the Late Phase of Ischemic Preconditioning, 240
Hyperhomocysteinemia
Structure of Cerebral Arterioles in Cystathionine β-Synthase-Deficient Mice, 931
Hyperoxia
Regulation of the Brain's Vascular Responses to Oxygen, 1031
Hyperphosphorylation
Heart Failure and the Ryanodine Receptor: Does Occam's Razor Rule?, 979
Hypertension
Hypertension-Linked Decrease in the Expression of Brain γ-Adducin, 633
Phosphatidylinositol 3-Kinase: A Key Regulator of Vascular Tone?, 273
Hypertrophic cardiomyopathy
Cardiac Dysfunction in Hypertrophic Cardiomyopathy Mutant Tropomyosin Mice Is Transgene-Dependent, Hypertrophy-Independent, and Improved by β-Blockade, 255
Identification of Novel Interactions Between Domains of Myosin Binding Protein-C That Are Modulated by Hypertrophic Cardiomyopathy Missense Mutations, 704
Myofilament Calcium Sensitivity and Cardiac Disease: Insights From Troponin I Isoforms and Mutants, 525
Structure-Function Relationships in Myosin Binding Protein-C: Taking Off the Blinders and Collaring Hypertrophic Cardiomyopathy, 656
Troponin I: In Sickness and In Health—and Normal Development, 449
Hypertrophy
$G\alpha_{12/13}$ Mediates α_1-Adrenergic Receptor-Induced Cardiac Hypertrophy, 961
H11 Kinase Is a Novel Mediator of Myocardial Hypertrophy In Vivo, 1007
Increased Exchange Current but Normal Ca^{2+} Transport via Na^+-Ca^{2+} Exchange During Cardiac Hypertrophy After Myocardial Infarction, 323
Involvement of Extracellular Signal-Regulated Kinases 1/2 in Cardiac Hypertrophy and Cell Death, 776

Hypothalamus/brainstem
Hypertension-Linked Decrease in the Expression of Brain γ-Adducin, 633
Hypoxia
Decreasing Cellular Hydrogen Peroxide With Catalase Mimics the Effects of Hypoxia on the Sensitivity of the L-Type Ca^{2+} Channel to β-Adrenergic Receptor Stimulation in Cardiac Myocytes, 601
Hypoxia and HIF-1α Stability: Another Stress-Sensing Mechanism for Shc, 4
Hypoxia, BNip3 Proteins, and the Mitochondrial Death Pathway in Cardiomyocytes, 183
Hypoxic Induction of the Hypoxia-Inducible Factor Is Mediated via the Adaptor Protein Shc in Endothelial Cells, 38
Hypoxic Pulmonary Vasoconstriction: Ups and Downs of Reactive Oxygen Species, 649
Inducible Expression of BNIP3 Provokes Mitochondrial Defects and Hypoxia-Mediated Cell Death of Ventricular Myocytes, 226
Inhibition of Hypoxia-Induced Apoptosis by Modulation of Retinoblastoma Protein-Dependent Signaling in Cardiomyocytes, 782
Mitochondrial Reactive Oxygen Species Trigger Calcium Increases During Hypoxia in Pulmonary Arterial Myocytes, 719
Smad2 Mediates Transforming Growth Factor-β Induction of Endothelial Nitric Oxide Synthase Expression, 806
Hypoxia-inducible factor-1
Hypoxia and HIF-1α Stability: Another Stress-Sensing Mechanism for Shc, 4
Hypoxic Induction of the Hypoxia-Inducible Factor Is Mediated via the Adaptor Protein Shc in Endothelial Cells, 38
Hypoxic pulmonary vasoconstriction
Effects of S-Nitrosation and Cross-Linking of Hemoglobin on Hypoxic Pulmonary Vasoconstriction in Isolated Rat Lungs, 626

I

I_{CRAC}
TRPC4 Knockout Mice: The Coming of Age of TRP Channels as Gates of Calcium Entry Responsible for Cellular Responses, 1
In vitro differentiation
Differentiation of Pluripotent Embryonic Stem Cells Into Cardiomyocytes, 189
Infarction
Stem Cells for Myocardial Regeneration, 1092
Inflammation
Cooperation Between Secretory Phospholipase A_2 and TNF-Receptor Superfamily Signaling: Implications for the Inflammatory Response in Atherogenesis, 681
Identification of 5-Lipoxygenase as a Major Gene Contributing to Atherosclerosis Susceptibility in Mice, 120
Innate and Adaptive Immunity in the Pathogenesis of Atherosclerosis, 281
Interleukin-18/Interleukin-18 Binding Protein Signaling Modulates Ischemia-Induced Neovascularization in Mice Hindlimb, 441
Local Expression of C-Type Natriuretic Peptide Suppresses Inflammation, Eliminates Shear Stress-Induced Thrombosis, and Prevents Neointima Formation Through Enhanced Nitric Oxide Production in Rabbit Injured Carotid Arteries, 1063
Osteopontin Plays an Important Role in the Development of Medial Thickening and Neointimal Formation, 77
PPARγ and Vascular Inflammation: Adding Another Piece to the Puzzle, 373
Inflammatory mediators
Inflammatory Mediators and the Failing Heart: Past, Present, and the Foreseeable Future, 988
Infliximab
Inflammatory Mediators and the Failing Heart: Past, Present, and the Foreseeable Future, 988
Inhibitors
Knockout Mice for Pharmacological Screening: Testing the Specificity of Na^+-Ca^{2+} Exchange Inhibitors, 90
Integrins
Mechanical Signaling and the Cellular Response to Extracellular Matrix in Angiogenesis and Cardiovascular Physiology, 877
Novel Vascular Endothelial Growth Factor Binding Domains of Fibronectin Enhance Vascular Endothelial Growth Factor Biological Activity, 25
PPARα Inhibits TGF-β-Induced β_5 Integrin Transcription in Vascular Smooth Muscle Cells by Interacting With Smad4, e35
Role of Integrins in Endothelial Mechanosensing of Shear Stress, 769
Intercalated disk physiology
An Electric Field Mechanism for Transmission of Excitation Between Myocardial Cells, 985
Intercalated disks
Localization of Sodium Channels in Intercalated Disks Modulates Cardiac Conduction, 1176
Intercellular adhesion molecule-1
$G\alpha_q$ and Gβγ Regulate PAR-1 Signaling of Thrombin-Induced NF-κB Activation and ICAM-1 Transcription in Endothelial Cells, 398
Interleukin-18
Interleukin-18/Interleukin-18 Binding Protein Signaling Modulates Ischemia-Induced Neovascularization in Mice Hindlimb, 441
Interleukin-6
Vascular Inflammation Is Negatively Autoregulated by Interaction Between CCAAT/Enhancer-Binding Protein-δ and Peroxisome Proliferator-Activated Receptor-γ, 427
Intima
Diverse Origin of Intimal Cells: Smooth Muscle Cells, Myofibroblasts, Fibroblasts, and Beyond?, 652
Intimal smooth muscle cells
Intimal Smooth Muscle Cells as a Target for Peroxisome Proliferator-Activated Receptor-γ Ligand Therapy, 210
Intracellular Ca^{2+}
Tubulovascular Nitric Oxide Crosstalk: Buffering of Angiotensin II-Induced Medullary Vasoconstriction, 487
Intracellular calcium
Increased Exchange Current but Normal Ca^{2+} Transport via Na^+-Ca^{2+} Exchange During Cardiac Hypertrophy After Myocardial Infarction, 323
Intragranular pH
Hydralazine Reduces the Quantal Size of Secretory Events by Displacement of Catecholamines From Adrenomedullary Chromaffin Secretory Vesicles, 830
Intrauterine growth retardation
Intrauterine Growth Retardation Is Associated With Reduced Activity and Expression of the Cationic Amino Acid Transport Systems y^+/hCAT-1 and y^+/hCAT-2B and Lower Activity of Nitric Oxide Synthase in Human Umbilical Vein Endothelial Cells, 127
Intravital microscopy
Estrogens Inhibit Angiotensin II-Induced Leukocyte-Endothelial Cell Interactions In Vivo via Rapid Endothelial Nitric Oxide Synthase and Cyclooxygenase Activation, 1142
Ion channels
Connexin Diversity: Discriminating the Message, 85
Ion currents
Comparison of Ion-Channel Subunit Expression in Canine Cardiac Purkinje Fibers and Ventricular Muscle, 790
Ion transport
Proteome Analysis and Functional Expression Identify Mortalin as an Antiapoptotic Gene Induced by Elevation of $[Na^+]_i/[K^+]_i$ Ratio in Cultured Vascular Smooth Muscle Cells, 915
Ischemia
Acidification Prevents Endothelial Cell Apoptosis by Axl Activation, e4
Fibroblast Growth Factor-2 Gene Transfer Can Stimulate Hepatocyte Growth Factor Expression Irrespective of Hypoxia-Mediated Downregulation in Ischemic Limbs, 923
Gene Dosage-Dependent Effects of Cardiac-Specific Overexpression of the A_3 Adenosine Receptor, 165
H11 Kinase Is a Novel Mediator of Myocardial Hypertrophy In Vivo, 1007
Interleukin-18/Interleukin-18 Binding Protein Signaling Modulates Ischemia-Induced Neovascularization in Mice Hindlimb, 441
Protease-Activated Receptor-2 Stimulates Angiogenesis and Accelerates Hemodynamic Recovery in a Mouse Model of Hindlimb Ischemia, 346
Rac-Dependent Monocyte Chemoattractant Protein-1 Production Is Induced by Nutrient Deprivation, 798
Stem Cells for Myocardial Regeneration, 1092
Ischemia/reperfusion
Ischemic Protection and Myofibrillar Cardiomyopathy: Dose-Dependent Effects of In Vivo δPKC Inhibition, 741

Ischemic preconditioning
Aldose Reductase Is an Obligatory Mediator of the Late Phase of Ischemic Preconditioning, 240

J

Junctional cleft potential
An Electric Field Mechanism for Transmission of Excitation Between Myocardial Cells, 985

K

K^+ channels
Peroxynitrite Inhibits Ca^{2+}-Activated K^+ Channel Activity in Smooth Muscle of Human Coronary Arterioles, 1070
Knockout mice
Transcriptional Control of Cardiac Allograft Vasculopathy by Early Growth Response Gene-1 (Egr-1), 135
Kv1.5
O_2 Sensing in the Human Ductus Arteriosus: Regulation of Voltage-Gated K^+ Channels in Smooth Muscle Cells by a Mitochondrial Redox Sensor, 478
Kv2.1
O_2 Sensing in the Human Ductus Arteriosus: Regulation of Voltage-Gated K^+ Channels in Smooth Muscle Cells by a Mitochondrial Redox Sensor, 478

L

L-type Ca^{2+} channels
Decreasing Cellular Hydrogen Peroxide With Catalase Mimics the Effects of Hypoxia on the Sensitivity of the L-Type Ca^{2+} Channel to β-Adrenergic Receptor Stimulation in Cardiac Myocytes, 601
Life Span of Ventricular Fibrillation Frequencies, 339
L-type calcium channels
L-Type Ca^{2+} Channel Density and Regulation Are Altered in Failing Human Ventricular Myocytes and Recover After Support With Mechanical Assist Devices, 517
L-Type Ca^{2+} Channels Gaining Respect in Heart Failure, 451
Left ventricle assist device
L-Type Ca^{2+} Channel Density and Regulation Are Altered in Failing Human Ventricular Myocytes and Recover After Support With Mechanical Assist Devices, 517
Letters to the Editor
Exercise Does Not Protect the Female Heart: An Unconvincing Conclusion?, e2
Novel Perspectives on the Beating Rate of the Heart, e3
Transdifferentiation, a Potential Mechanism for Covering Vascular Grafts Grown Within Recipient's Peritoneal Cavity With Endothelial-Like Cells, e1
Leukocytes
Estrogens Inhibit Angiotensin II-Induced Leukocyte-Endothelial Cell Interactions In Vivo via Rapid Endothelial Nitric Oxide Synthase and Cyclooxygenase Activation, 1142
Nitrated Lipids: Defining Their Bioactivity, 371
Ligand binding
Identification of Novel Interactions Between Domains of Myosin Binding Protein-C That Are Modulated by Hypertrophic Cardiomyopathy Missense Mutations, 704
Lipid mediators
Cooperation Between Secretory Phospholipase A_2 and TNF-Receptor Superfamily Signaling: Implications for the Inflammatory Response in Atherogenesis, 681
5-Lipoxygenase
Identification of 5-Lipoxygenase as a Major Gene Contributing to Atherosclerosis Susceptibility in Mice, 120
Local control
The Ca^{2+} Synapse Redo: A Matter of Location, Location, Location, 276
Lung microvascular permeability
Impairment of Store-Operated Ca^{2+} Entry in TRPC4$^{-/-}$ Mice Interferes With Increase in Lung Microvascular Permeability, 70
Lymphocytes
Innate and Adaptive Immunity in the Pathogenesis of Atherosclerosis, 281

M

Macrophages
Induction of Bone-Type Alkaline Phosphatase in Human Vascular Smooth Muscle Cells: Roles of Tumor Necrosis Factor-α and Oncostatin M Derived From Macrophages, 9
Innate and Adaptive Immunity in the Pathogenesis of Atherosclerosis, 281
Malignant hyperthermia
Leaky "Feet" and Sudden Death, 181
Mapping
High-Resolution Electrophysiological Assessment of Human Embryonic Stem Cell-Derived Cardiomyocytes, 659
Mast cells
Nonendothelial Source of Nitric Oxide in Arterioles But Not in Venules: Alternative Source Revealed In Vivo by Diaminofluorescein Microfluorography, e55
Matrix degradation
Targeted Disruption of the Matrix Metalloproteinase-9 Gene Impairs Smooth Muscle Cell Migration and Geometrical Arterial Remodeling, 852
Matrix metalloproteinase-9
Matrix Metalloproteinase-9 Is Necessary for the Regulation of Smooth Muscle Cell Replication and Migration After Arterial Injury, 845
Matrix metalloproteinases
Bioactive Peptide Signaling Within the Myocardial Interstitium and the Matrix Metalloproteinases, 1082
Gene Transfer of the Urokinase-Type Plasminogen Activator Receptor-Targeted Matrix Metalloproteinase Inhibitor TIMP-1.ATF Suppresses Neointima Formation More Efficiently Than Tissue Inhibitor of Metalloproteinase-1, 945
Targeting Pericellular Proteolysis in Vascular Disease, 861
Tumor Necrosis Factor-α-Induced AT_1 Receptor Upregulation Enhances Angiotensin II-Mediated Cardiac Fibroblast Responses That Favor Fibrosis, 1119
Mechanical efficiency
Short-Term Treatment With Ranolazine Improves Mechanical Efficiency in Dogs With Chronic Heart Failure, 278
Mechanical signaling
Dance Band on the *Titanic*: Biomechanical Signaling in Cardiac Hypertrophy, 888
Mechanisms of arrhythmias
Regional Differences in Ventricular Fibrillation in the Open-Chest Porcine Left Ventricle, 733
Mechanotransduction
Mechanical Signaling and the Cellular Response to Extracellular Matrix in Angiogenesis and Cardiovascular Physiology, 877
Role of Integrins in Endothelial Mechanosensing of Shear Stress, 769
MEK
Ras/Erk Signaling Is Essential for Activation of Protein Synthesis by Gq Protein-Coupled Receptor Agonists in Adult Cardiomyocytes, 821
Membrane permeabilization
Sphingosylphosphorylcholine Is a Novel Messenger for Rho-Kinase-Mediated Ca^{2+} Sensitization in the Bovine Cerebral Artery: Unimportant Role for Protein Kinase C, 112
Membrane transport
Quantitative Assessment of the SR Ca^{2+} Leak-Load Relationship, 594
Mice
Accelerated Atherosclerosis and Calcification in Vein Grafts: A Study in APOE*3 Leiden Transgenic Mice, 577
Cardiac Dysfunction in Hypertrophic Cardiomyopathy Mutant Tropomyosin Mice Is Transgene-Dependent, Hypertrophy-Independent, and Improved by β-Blockade, 255
Microarrays
DNA Microarrays: Implications for Cardiovascular Medicine, 559
Microcirculation
Defect in Microvascular Adaptation to Chronic Changes in Blood Flow in Mice Lacking the Gene Encoding for Dystrophin, 1183
Nonendothelial Source of Nitric Oxide in Arterioles But Not in Venules: Alternative Source Revealed In Vivo by Diaminofluorescein Microfluorography, e55
Microtubules
Microtubule Involvement in the Adaptation to Altered Mechanical Load in Developing Chick Myocardium, 353

Migration
1α,25-Dihydroxyvitamin D_3 Induces Vascular Smooth Muscle Cell Migration via Activation of Phosphatidylinositol 3-Kinase, 17
Matrix Metalloproteinase-9 Is Necessary for the Regulation of Smooth Muscle Cell Replication and Migration After Arterial Injury, 845
Missense mutations
Identification of Novel Interactions Between Domains of Myosin Binding Protein-C That Are Modulated by Hypertrophic Cardiomyopathy Missense Mutations, 704
Mitochondria permeability transition
Hypoxia, BNip3 Proteins, and the Mitochondrial Death Pathway in Cardiomyocytes, 183
Mitochondrial K_{ATP}
Sarcolemmal K_{ATP} Channel Triggers Opioid-Induced Delayed Cardioprotection in the Rat, 186
Mitochondrial membrane potential
O_2 Sensing in the Human Ductus Arteriosus: Regulation of Voltage-Gated K^+ Channels in Smooth Muscle Cells by a Mitochondrial Redox Sensor, 478
Mitogen-activated protein kinase
Involvement of Extracellular Signal-Regulated Kinases 1/2 in Cardiac Hypertrophy and Cell Death, 776
Phorbol Ester Induction of Angiotensin-Converting Enzyme Transcription Is Mediated by Egr-1 and AP-1 in Human Endothelial Cells via ERK1/2 Pathway, 899
Modal gating
Identification of Gating Modes in Single Native Na^+ Channels From Human Atrium and Ventricle, 421
Molecular biology
Comparison of Ion-Channel Subunit Expression in Canine Cardiac Purkinje Fibers and Ventricular Muscle, 790
Monocrotaline
Ventricular Hypertrophy Plus Neurohumoral Activation Is Necessary to Alter the Cardiac β-Adrenoceptor System in Experimental Heart Failure, 1056
Monocyte adhesion
Atorvastatin Attenuates Remnant Lipoprotein-Induced Monocyte Adhesion to Vascular Endothelium Under Flow Conditions, 263
Monocyte chemoattractant protein-1
Rac-Dependent Monocyte Chemoattractant Protein-1 Production Is Induced by Nutrient Deprivation, 798
Mouse
Identification of 5-Lipoxygenase as a Major Gene Contributing to Atherosclerosis Susceptibility in Mice, 120
Mouse arterial injury
Matrix Metalloproteinase-9 Is Necessary for the Regulation of Smooth Muscle Cell Replication and Migration After Arterial Injury, 845
Mouse lung endothelial cells
Impairment of Store-Operated Ca^{2+} Entry in $TRPC4^{-/-}$ Mice Interferes With Increase in Lung Microvascular Permeability, 70
mRNA translation
Ras/Erk Signaling Is Essential for Activation of Protein Synthesis by Gq Protein-Coupled Receptor Agonists in Adult Cardiomyocytes, 821
Multivariate analysis of variance
Advice on Statistical Analysis for Circulation Research, 662
Mutations
Enhanced Basal Activity of a Cardiac Ca^{2+} Release Channel (Ryanodine Receptor) Mutant Associated With Ventricular Tachycardia and Sudden Death, 218
Myocardial infarction
Aldose Reductase Is an Obligatory Mediator of the Late Phase of Ischemic Preconditioning, 240
Myocardial ischemia
Dissociation of Regional Adaptations to Ischemia and Global Myolysis in an Accelerated Swine Model of Chronic Hibernating Myocardium, 970
Hibernating Myocardium: New Answers, Still More Questions!, 863
Progressive Increases in Complexity of T-Wave Oscillations Herald Ischemia-Induced Ventricular Fibrillation, 727
Myocardial ischemia/reperfusion injury
Aldose Reductase Is an Obligatory Mediator of the Late Phase of Ischemic Preconditioning, 240
Myocardial metabolism
Short-Term Treatment With Ranolazine Improves Mechanical Efficiency in Dogs With Chronic Heart Failure, 278
Myocardial regeneration
Derivation and Potential Applications of Human Embryonic Stem Cells, 866
Stem Cells for Myocardial Regeneration, 1092
Myocardium
L-Type Ca^{2+} Channels Gaining Respect in Heart Failure, 451
Myofibrillar cardiomyopathy
Ischemic Protection and Myofibrillar Cardiomyopathy: Dose-Dependent Effects of In Vivo δPKC Inhibition, 741
Myofibrillar loss
Dissociation of Regional Adaptations to Ischemia and Global Myolysis in an Accelerated Swine Model of Chronic Hibernating Myocardium, 970
Myofibroblast
Gene Expression in Fibroblasts and Fibrosis: Involvement in Cardiac Hypertrophy, 1103
Myofilament proteins
Myofilament Calcium Sensitivity and Cardiac Disease: Insights From Troponin I Isoforms and Mutants, 525
Myosin binding protein-C
Structure-Function Relationships in Myosin Binding Protein-C: Taking Off the Blinders and Collaring Hypertrophic Cardiomyopathy, 656
Myosin phosphatase
New Roads Leading to Ca^{2+} Sensitization, 83

N

***N*$^{\omega}$-nitro-L-arginine hypertension**
Phosphoinositide 3-Kinase Mediates Enhanced Spontaneous and Agonist-Induced Contraction in Aorta of Deoxycorticosterone Acetate-Salt Hypertensive Rats, 360
Na^+ channel
Phosphorylation and Putative ER Retention Signals Are Required for Protein Kinase A-Mediated Potentiation of Cardiac Sodium Current, 540
Na^+-Ca^{2+} exchange
Knockout Mice for Pharmacological Screening: Testing the Specificity of Na^+-Ca^{2+} Exchange Inhibitors, 90
NAADP
Nicotinic Acid Adenine Dinucleotide Phosphate Mediates Ca^{2+} Signals and Contraction in Arterial Smooth Muscle via a Two-Pool Mechanism, 1168
NAD(P)H oxidase
Angiotensin II Signaling in the Brain: Compartmentalization of Redox Signaling?, 982
Angiotensin II Stimulation of NAD(P)H Oxidase Activity: Upstream Mediators, 406
Increased NADPH Oxidase Activity, gp91phox Expression, and Endothelium-Dependent Vasorelaxation During Neointima Formation in Rabbits, 54
Novel Role of $gp91^{phox}$-Containing NAD(P)H Oxidase in Vascular Endothelial Growth Factor-Induced Signaling and Angiogenesis, 1160
Withdrawal of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Inhibitors Elicits Oxidative Stress and Induces Endothelial Dysfunction in Mice, 173
Neointima
Determinants of Notch-3 Receptor Expression and Signaling in Vascular Smooth Muscle Cells: Implications in Cell-Cycle Regulation, 999
Neointima formation
Gene Transfer of the Urokinase-Type Plasminogen Activator Receptor-Targeted Matrix Metalloproteinase Inhibitor TIMP-1.ATF Suppresses Neointima Formation More Efficiently Than Tissue Inhibitor of Metalloproteinase-1, 945
Matrix Metalloproteinase-9 Is Necessary for the Regulation of Smooth Muscle Cell Replication and Migration After Arterial Injury, 845
Neointimal hyperplasia
Targeting Pericellular Proteolysis in Vascular Disease, 861

Neural NO synthase
Nonendothelial Source of Nitric Oxide in Arterioles But Not in Venules: Alternative Source Revealed In Vivo by Diaminofluorescein Microfluorography, e55
Neurohumoral activation
Ventricular Hypertrophy Plus Neurohumoral Activation Is Necessary to Alter the Cardiac β-Adrenoceptor System in Experimental Heart Failure, 1056
Neurons
Hypertension-Linked Decrease in the Expression of Brain γ-Adducin, 633
Neurotrophins
Reduced Apoptosis and Increased Lesion Development in the Flow-Restricted Carotid Artery of $p75^{NTR}$-Null Mutant Mice, 494
Neutrophils
Nitrated Lipids: Defining Their Bioactivity, 371
Nitrolinoleate Inhibits Superoxide Generation, Degranulation, and Integrin Expression by Human Neutrophils: Novel Antiinflammatory Properties of Nitric Oxide-Derived Reactive Species in Vascular Cells, 375
α-Nicotinic acetylcholine receptors
α_7-Nicotinic Acetylcholine Receptors on Cerebral Perivascular Sympathetic Nerves Mediate Choline-Induced Nitrergic Neurogenic Vasodilation, 62
Nitric oxide
Chronic Hypoxia Increases Endothelial Nitric Oxide Synthase Generation of Nitric Oxide by Increasing Heat Shock Protein 90 Association and Serine Phosphorylation, 300
Effects of S-Nitrosation and Cross-Linking of Hemoglobin on Hypoxic Pulmonary Vasoconstriction in Isolated Rat Lungs, 626
Increased Superoxide and Vascular Dysfunction in CuZnSOD-Deficient Mice, 938
Intrauterine Growth Retardation Is Associated With Reduced Activity and Expression of the Cationic Amino Acid Transport Systems y^+/hCAT-1 and y^+/hCAT-2B and Lower Activity of Nitric Oxide Synthase in Human Umbilical Vein Endothelial Cells, 127
Local Expression of C-Type Natriuretic Peptide Suppresses Inflammation, Eliminates Shear Stress-Induced Thrombosis, and Prevents Neointima Formation Through Enhanced Nitric Oxide Production in Rabbit Injured Carotid Arteries, 1063
Neuronal Nitric Oxide Synthase Gene Transfer Promotes Cardiac Vagal Gain of Function, 1089
Nitrated Lipids: Defining Their Bioactivity, 371
Nitric Oxide-Induced Motility in Aortic Smooth Muscle Cells: Role of Protein Tyrosine Phosphatase SHP-2 and GTP-Binding Protein Rho, 390
Nitrolinoleate Inhibits Superoxide Generation, Degranulation, and Integrin Expression by Human Neutrophils: Novel Antiinflammatory Properties of Nitric Oxide-Derived Reactive Species in Vascular Cells, 375
nNOS-Containing Perivascular Nerves: Stranger by the Minute, 7
Nonendothelial Source of Nitric Oxide in Arterioles But Not in Venules: Alternative Source Revealed In Vivo by Diaminofluorescein Microfluorography, e55
Plasma Nitrosothiols Contribute to the Systemic Vasodilator Effects of Intravenously Applied NO: Experimental and Clinical Study on the Fate of NO in Human Blood, 470
Reduced Myocardial and Systemic L-Arginine Uptake in Heart Failure, 1198
Regulation of the Brain's Vascular Responses to Oxygen, 1031
Tubulovascular Nitric Oxide Crosstalk: Buffering of Angiotensin II-Induced Medullary Vasoconstriction, 487
Withdrawal of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Inhibitors Elicits Oxidative Stress and Induces Endothelial Dysfunction in Mice, 173
α_7-Nicotinic Acetylcholine Receptors on Cerebral Perivascular Sympathetic Nerves Mediate Choline-Induced Nitrergic Neurogenic Vasodilation, 62
Nitric oxide synthase
Physical Training Increases eNOS Vascular Expression and Activity and Reduces Restenosis After Balloon Angioplasty or Arterial Stenting in Rats, 1190
Nitrolinoleate
Nitrolinoleate Inhibits Superoxide Generation, Degranulation, and Integrin Expression by Human Neutrophils: Novel Antiinflammatory Properties of Nitric Oxide-Derived Reactive Species in Vascular Cells, 375
Nonparametric tests
Advice on Statistical Analysis for Circulation Research, 662
Norepinephrine
nNOS-Containing Perivascular Nerves: Stranger by the Minute, 7
Nuclear factor-κB
$G\alpha_q$ and $G\beta\gamma$ Regulate PAR-1 Signaling of Thrombin-Induced NF-κB Activation and ICAM-1 Transcription in Endothelial Cells, 398
Nucleotides
Functional Compartmentation of Endothelial P2Y Receptor Signaling, 292
Nutrient deprivation
Rac-Dependent Monocyte Chemoattractant Protein-1 Production Is Induced by Nutrient Deprivation, 798

O

Oncostatin M
Induction of Bone-Type Alkaline Phosphatase in Human Vascular Smooth Muscle Cells: Roles of Tumor Necrosis Factor-α and Oncostatin M Derived From Macrophages, 9
Opioids
Sarcolemmal K_{ATP} Channel Triggers Opioid-Induced Delayed Cardioprotection in the Rat, 186
Optical mapping
Cardiomyocyte Cultures With Controlled Macroscopic Anisotropy: A Model for Functional Electrophysiological Studies of Cardiac Muscle, e45
Optimal mapping
Life Span of Ventricular Fibrillation Frequencies, 339
Ouabain
Proteome Analysis and Functional Expression Identify Mortalin as an Antiapoptotic Gene Induced by Elevation of $[Na^+]_i/[K^+]_i$ Ratio in Cultured Vascular Smooth Muscle Cells, 915
Outflow tract
Embryogenesis of Transposition of the Great Arteries: A Lesson From the Heart, 87
Hyperplastic Conotruncal Endocardial Cushions and Transposition of Great Arteries in Perlecan-Null Mice, 158
Oxidant signaling
Angiotensin II Signaling in the Brain: Compartmentalization of Redox Signaling?, 982
Oxidants
Mitochondrial Reactive Oxygen Species Trigger Calcium Increases During Hypoxia in Pulmonary Arterial Myocytes, 719
Oxidative stress
Fluid Shear Stress Attenuates Hydrogen Peroxide-Induced c-Jun NH_2-Terminal Kinase Activation via a Glutathione Reductase-Mediated Mechanism, 712
Vitamin D_3-Upregulated Protein-1 (VDUP-1) Regulates Redox-Dependent Vascular Smooth Muscle Cell Proliferation Through Interaction With Thioredoxin, 689
Oxygen delivery
Erythrocyte and the Regulation of Human Skeletal Muscle Blood Flow and Oxygen Delivery: Role of Circulating ATP, 1046
Oxygen sensor
Erythrocyte and the Regulation of Human Skeletal Muscle Blood Flow and Oxygen Delivery: Role of Circulating ATP, 1046

P

P-selectin
HuEP5C7 as a Humanized Monoclonal Anti-E/P-Selectin Neurovascular Protective Strategy in a Blinded Placebo-Controlled Trial of Nonhuman Primate Stroke, 907
p21-Activated kinase
p21-Activated Kinase Increases the Calcium Sensitivity of Rat Triton-Skinned Cardiac Muscle Fiber Bundles via a Mechanism Potentially Involving Novel Phosphorylation of Troponin I, 509
p75 Neurotrophin receptor
Reduced Apoptosis and Increased Lesion Development in the Flow-Restricted Carotid Artery of $p75^{NTR}$-Null Mutant Mice, 494

Papio
HuEP5C7 as a Humanized Monoclonal Anti-E/P-Selectin Neurovascular Protective Strategy in a Blinded Placebo-Controlled Trial of Nonhuman Primate Stroke, 907
Parasympathetic response of the heart
Role of Sterol Regulatory Element Binding Proteins in the Regulation of $G\alpha_{i2}$ Expression in Cultured Atrial Cells, 32
Patch clamp
Identification of Gating Modes in Single Native Na^+ Channels From Human Atrium and Ventricle, 421
Patch-clamp techniques
L-Type Ca^{2+} Channels Gaining Respect in Heart Failure, 451
Pericytes
Tubulovascular Nitric Oxide Crosstalk: Buffering of Angiotensin II-Induced Medullary Vasoconstriction, 487
Perlecan
Embryogenesis of Transposition of the Great Arteries: A Lesson From the Heart, 87
Hyperplastic Conotruncal Endocardial Cushions and Transposition of Great Arteries in Perlecan-Null Mice, 158
Permselectivity
Cardiac Gap Junction Channels Show Quantitative Differences in Selectivity, 104
Peroxisome proliferator-activated receptor α
PPARα Inhibits TGF-β-Induced β_5 Integrin Transcription in Vascular Smooth Muscle Cells by Interacting With Smad4, e35
Peroxisome proliferator-activated receptor γ
Intimal Smooth Muscle Cells as a Target for Peroxisome Proliferator-Activated Receptor-γ Ligand Therapy, 210
PPARγ and Vascular Inflammation: Adding Another Piece to the Puzzle, 373
Vascular Inflammation Is Negatively Autoregulated by Interaction Between CCAAT/Enhancer-Binding Protein-δ and Peroxisome Proliferator-Activated Receptor-γ, 427
Peroxynitrite
Nitrolinoleate Inhibits Superoxide Generation, Degranulation, and Integrin Expression by Human Neutrophils: Novel Antiinflammatory Properties of Nitric Oxide-Derived Reactive Species in Vascular Cells, 375
Peroxynitrite Inhibits Ca^{2+}-Activated K^+ Channel Activity in Smooth Muscle of Human Coronary Arterioles, 1070
Regulation of the Brain's Vascular Responses to Oxygen, 1031
Pertussis toxin
Inactivation of Enhanced Expression of G_i Proteins by Pertussis Toxin Attenuates the Development of High Blood Pressure in Spontaneously Hypertensive Rats, 247
Pharmacological responses
Characterization and Enrichment of Cardiomyocytes Derived From Human Embryonic Stem Cells, 501
Phosphatase and tensin homolog
Phosphoinositide 3-Kinase Mediates Enhanced Spontaneous and Agonist-Induced Contraction in Aorta of Deoxycorticosterone Acetate-Salt Hypertensive Rats, 360
Phosphatidylinositol 3-kinase
1α,25-Dihydroxyvitamin D_3 Induces Vascular Smooth Muscle Cell Migration via Activation of Phosphatidylinositol 3-Kinase, 17
Phosphatidylinositol 3-Kinase: A Key Regulator of Vascular Tone?, 273
Phosphatidylinositol 3-Kinase Functionally Compartmentalizes the Concurrent G_s Signaling During β_2-Adrenergic Stimulation, 46
Phosphatidylinositol 4,5-bisphosphate
α_1-Adrenoceptor-Mediated Breakdown of Phosphatidylinositol 4,5-Bisphosphate Inhibits Pinacidil-Activated ATP-Sensitive K^+ Currents in Rat Ventricular Myocytes, 232
Phosphoinositide 3-kinase
Phosphoinositide 3-Kinase Mediates Enhanced Spontaneous and Agonist-Induced Contraction in Aorta of Deoxycorticosterone Acetate-Salt Hypertensive Rats, 360
Phospholamban
Phosphatidylinositol 3-Kinase Functionally Compartmentalizes the Concurrent G_s Signaling During β_2-Adrenergic Stimulation, 46
Phospholipase
TRPC4 Knockout Mice: The Coming of Age of TRP Channels as Gates of Calcium Entry Responsible for Cellular Responses, 1
Phosphorylation
CK2 Phosphorylates the Angiotensin-Converting Enzyme and Regulates Its Retention in the Endothelial Cell Plasma Membrane, 749
p21-Activated Kinase Increases the Calcium Sensitivity of Rat Triton-Skinned Cardiac Muscle Fiber Bundles via a Mechanism Potentially Involving Novel Phosphorylation of Troponin I, 509
Regulation of G Protein-Coupled Receptor Signaling by Scaffold Proteins, 672
Pigs
Spatial and Temporal Inhomogeneities During Ca^{2+} Release From the Sarcoplasmic Reticulum in Pig Ventricular Myocytes, 1023
PKA-dependent phosphorylation
L-Type Ca^{2+} Channel Density and Regulation Are Altered in Failing Human Ventricular Myocytes and Recover After Support With Mechanical Assist Devices, 517
Plasmin(ogen)
Gene Transfer of the Urokinase-Type Plasminogen Activator Receptor-Targeted Matrix Metalloproteinase Inhibitor TIMP-1.ATF Suppresses Neointima Formation More Efficiently Than Tissue Inhibitor of Metalloproteinase-1, 945
Plasminogen activator
Gene Transfer of the Urokinase-Type Plasminogen Activator Receptor-Targeted Matrix Metalloproteinase Inhibitor TIMP-1.ATF Suppresses Neointima Formation More Efficiently Than Tissue Inhibitor of Metalloproteinase-1, 945
Targeting Pericellular Proteolysis in Vascular Disease, 861
Plasticity
Stem Cells for Myocardial Regeneration, 1092
Platelet-derived growth factor
Determinants of Notch-3 Receptor Expression and Signaling in Vascular Smooth Muscle Cells: Implications in Cell-Cycle Regulation, 999
Power analysis
Advice on Statistical Analysis for Circulation Research, 662
Primary myocardium
Cardiac Septation: A Late Contribution of the Embryonic Primary Myocardium to Heart Morphogenesis, 93
Proliferation
Deficiency in ClC-3 Chloride Channels Prevents Rat Aortic Smooth Muscle Cell Proliferation, e28
Regulation of Smooth Muscle Cell Differentiation by AT-Rich Interaction Domain Transcription Factors Mrf2α and Mrf2β, 382
Propagation in cardiac muscle
An Electric Field Mechanism for Transmission of Excitation Between Myocardial Cells, 985
Prostacyclin
Estrogens Inhibit Angiotensin II-Induced Leukocyte-Endothelial Cell Interactions In Vivo via Rapid Endothelial Nitric Oxide Synthase and Cyclooxygenase Activation, 1142
Protease-activated receptors
Protease-Activated Receptor-1-Mediated DNA Synthesis in Cardiac Fibroblast Is via Epidermal Growth Factor Receptor Transactivation: Distinct PAR-1 Signaling Pathways in Cardiac Fibroblasts and Cardiomyocytes, 532
Protein cleavage
CK2 Phosphorylates the Angiotensin-Converting Enzyme and Regulates Its Retention in the Endothelial Cell Plasma Membrane, 749
Protein kinase
Phosphorylation and Putative ER Retention Signals Are Required for Protein Kinase A-Mediated Potentiation of Cardiac Sodium Current, 540
Protein kinase A
Abnormal Ca^{2+} Release, but Normal Ryanodine Receptors, in Canine and Human Heart Failure, 1015
Protein kinase C
Ischemic Protection and Myofibrillar Cardiomyopathy: Dose-Dependent Effects of In Vivo δPKC Inhibition, 741
Sphingosylphosphorylcholine Is a Novel Messenger for Rho-Kinase-Mediated Ca^{2+} Sensitization in the Bovine Cerebral Artery: Unimportant Role for Protein Kinase C, 112
Protein kinase C-δ
$G\alpha_q$ and G$\beta\gamma$ Regulate PAR-1 Signaling of Thrombin-Induced NF-κB Activation and ICAM-1 Transcription in Endothelial Cells, 398

Protein kinase G
Brain Natriuretic Peptide Is Produced in Cardiac Fibroblasts and Induces Matrix Metalloproteinases, 1127
Protein trafficking
Phosphorylation and Putative ER Retention Signals Are Required for Protein Kinase A-Mediated Potentiation of Cardiac Sodium Current, 540
Proteinase-activated receptor-2
Protease-Activated Receptor-2 Stimulates Angiogenesis and Accelerates Hemodynamic Recovery in a Mouse Model of Hindlimb Ischemia, 346
Proteome
Proteome Analysis and Functional Expression Identify Mortalin as an Antiapoptotic Gene Induced by Elevation of $[Na^+]_i/[K^+]_i$ Ratio in Cultured Vascular Smooth Muscle Cells, 915
Pulmonary circulation
Mitochondrial Reactive Oxygen Species Trigger Calcium Increases During Hypoxia in Pulmonary Arterial Myocytes, 719

R

Rac
Angiotensin II Stimulation of NAD(P)H Oxidase Activity: Upstream Mediators, 406
Rac-Dependent Monocyte Chemoattractant Protein-1 Production Is Induced by Nutrient Deprivation, 798
Rac-1
Withdrawal of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Inhibitors Elicits Oxidative Stress and Induces Endothelial Dysfunction in Mice, 173
Radioisotopes
Reduced Myocardial and Systemic L-Arginine Uptake in Heart Failure, 1198
Ras
Hypoxic Induction of the Hypoxia-Inducible Factor Is Mediated via the Adaptor Protein Shc in Endothelial Cells, 38
Reactive oxygen species
Angiotensin II Signaling in the Brain: Compartmentalization of Redox Signaling?, 982
Angiotensin II Stimulation of NAD(P)H Oxidase Activity: Upstream Mediators, 406
Mitochondrial Reactive Oxygen Species Trigger Calcium Increases During Hypoxia in Pulmonary Arterial Myocytes, 719
Novel Role of $gp91^{phox}$-Containing NAD(P)H Oxidase in Vascular Endothelial Growth Factor-Induced Signaling and Angiogenesis, 1160
Superoxide Mediates the Actions of Angiotensin II in the Central Nervous System, 1038
Redox
O_2 Sensing in the Human Ductus Arteriosus: Regulation of Voltage-Gated K^+ Channels in Smooth Muscle Cells by a Mitochondrial Redox Sensor, 478
Redox signaling
Mitochondrial Reactive Oxygen Species Trigger Calcium Increases During Hypoxia in Pulmonary Arterial Myocytes, 719
Rejection
Alive and Kicking: Endothelium at the Geographic Nexus of Vascular Rejection, 1085
Remnant-like lipoprotein particles
Atorvastatin Attenuates Remnant Lipoprotein-Induced Monocyte Adhesion to Vascular Endothelium Under Flow Conditions, 263
Remodeling
Bioactive Peptide Signaling Within the Myocardial Interstitium and the Matrix Metalloproteinases, 1082
Brain Natriuretic Peptide Is Produced in Cardiac Fibroblasts and Induces Matrix Metalloproteinases, 1127
Diverse Origin of Intimal Cells: Smooth Muscle Cells, Myofibroblasts, Fibroblasts, and Beyond?, 652
Renin-angiotensin system
Superoxide Mediates the Actions of Angiotensin II in the Central Nervous System, 1038
Repeated measures
Advice on Statistical Analysis for Circulation Research, 662
Repolarization
Progressive Increases in Complexity of T-Wave Oscillations Herald Ischemia-Induced Ventricular Fibrillation, 727
Resistance between myocardial cells
An Electric Field Mechanism for Transmission of Excitation Between Myocardial Cells, 985
Restenosis
Intimal Smooth Muscle Cells as a Target for Peroxisome Proliferator-Activated Receptor-γ Ligand Therapy, 210
Physical Training Increases eNOS Vascular Expression and Activity and Reduces Restenosis After Balloon Angioplasty or Arterial Stenting in Rats, 1190
Targeted Disruption of the Matrix Metalloproteinase-9 Gene Impairs Smooth Muscle Cell Migration and Geometrical Arterial Remodeling, 852
Rho
Nitric Oxide-Induced Motility in Aortic Smooth Muscle Cells: Role of Protein Tyrosine Phosphatase SHP-2 and GTP-Binding Protein Rho, 390
Role of Integrins in Endothelial Mechanosensing of Shear Stress, 769
Rho kinase
New Roads Leading to Ca^{2+} Sensitization, 83
Sphingosylphosphorylcholine Is a Novel Messenger for Rho-Kinase-Mediated Ca^{2+} Sensitization in the Bovine Cerebral Artery: Unimportant Role for Protein Kinase C, 112
RhoA
3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase Inhibitors Interfere With Angiogenesis by Inhibiting the Geranylgeranylation of RhoA, 143
Right heart hypertrophy
Ventricular Hypertrophy Plus Neurohumoral Activation Is Necessary to Alter the Cardiac β-Adrenoceptor System in Experimental Heart Failure, 1056
Ryanodine receptors
Abnormal Ca^{2+} Release, but Normal Ryanodine Receptors, in Canine and Human Heart Failure, 1015
Alternans Goes Subcellular: A "Disease" of the Ryanodine Receptor?, 553
Depressed Ryanodine Receptor Activity Increases Variability and Duration of the Systolic Ca^{2+} Transient in Rat Ventricular Myocytes, 585
Enhanced Basal Activity of a Cardiac Ca^{2+} Release Channel (Ryanodine Receptor) Mutant Associated With Ventricular Tachycardia and Sudden Death, 218
Hypoxic Pulmonary Vasoconstriction: Ups and Downs of Reactive Oxygen Species, 649
Leaky "Feet" and Sudden Death, 181
Luminal Ca^{2+} Controls Termination and Refractory Behavior of Ca^{2+}-Induced Ca^{2+} Release in Cardiac Myocytes, 414
Nicotinic Acid Adenine Dinucleotide Phosphate Mediates Ca^{2+} Signals and Contraction in Arterial Smooth Muscle via a Two-Pool Mechanism, 1168
Quantitative Assessment of the SR Ca^{2+} Leak-Load Relationship, 594
Ryanodine-sensitive Ca^{2+} release channels
Carbon Monoxide Dilates Cerebral Arterioles by Enhancing the Coupling of Ca^{2+} Sparks to Ca^{2+}-Activated K^+ Channels, 610

S

***S*-nitrosohemoglobin**
Effects of S-Nitrosation and Cross-Linking of Hemoglobin on Hypoxic Pulmonary Vasoconstriction in Isolated Rat Lungs, 626
S-palmitoylation
Involvement of Src Family Protein Tyrosine Kinases in Ca^{2+} Sensitization of Coronary Artery Contraction Mediated by a Sphingosylphosphorylcholine-Rho-Kinase Pathway, 953
S6 kinase 1
Ras/Erk Signaling Is Essential for Activation of Protein Synthesis by Gq Protein-Coupled Receptor Agonists in Adult Cardiomyocytes, 821
***S*-nitrosothiols**
Plasma Nitrosothiols Contribute to the Systemic Vasodilator Effects of Intravenously Applied NO: Experimental and Clinical Study on the Fate of NO in Human Blood, 470

Sarcolemmal K_{ATP}
Sarcolemmal K_{ATP} Channel Triggers Opioid-Induced Delayed Cardioprotection in the Rat, 186
Sarcoplasmic reticulum
Abnormal Ca^{2+} Release, but Normal Ryanodine Receptors, in Canine and Human Heart Failure, 1015
Leaky "Feet" and Sudden Death, 181
Luminal Ca^{2+} Controls Termination and Refractory Behavior of Ca^{2+}-Induced Ca^{2+} Release in Cardiac Myocytes, 414
Nicotinic Acid Adenine Dinucleotide Phosphate Mediates Ca^{2+} Signals and Contraction in Arterial Smooth Muscle via a Two-Pool Mechanism, 1168
Quantitative Assessment of the SR Ca^{2+} Leak-Load Relationship, 594
Spatial and Temporal Inhomogeneities During Ca^{2+} Release From the Sarcoplasmic Reticulum in Pig Ventricular Myocytes, 1023
SB 242784
SB 242784, a Selective Inhibitor of the Osteoclastic V-H^+-ATPase, Inhibits Arterial Calcification in the Rat, 547
Septation
Cardiac Septation: A Late Contribution of the Embryonic Primary Myocardium to Heart Morphogenesis, 93
SERCA
Heart Failure and the Ryanodine Receptor: Does Occam's Razor Rule?, 979
Shc
Hypoxia and HIF-1α Stability: Another Stress-Sensing Mechanism for Shc, 4
Hypoxic Induction of the Hypoxia-Inducible Factor Is Mediated via the Adaptor Protein Shc in Endothelial Cells, 38
Shear stress
Role of Integrins in Endothelial Mechanosensing of Shear Stress, 769
SHP-2
Nitric Oxide-Induced Motility in Aortic Smooth Muscle Cells: Role of Protein Tyrosine Phosphatase SHP-2 and GTP-Binding Protein Rho, 390
Signal transducer and activator of transcription 3
Vascular Inflammation Is Negatively Autoregulated by Interaction Between CCAAT/Enhancer-Binding Protein-δ and Peroxisome Proliferator-Activated Receptor-γ, 427
Signal transduction
Apelin, the Novel Endogenous Ligand of the Orphan Receptor APJ, Regulates Cardiac Contractility, 434
Fluid Shear Stress Attenuates Hydrogen Peroxide-Induced c-Jun NH_2-Terminal Kinase Activation via a Glutathione Reductase-Mediated Mechanism, 712
Hypoxia and HIF-1α Stability: Another Stress-Sensing Mechanism for Shc, 4
Protease-Activated Receptor-1-Mediated DNA Synthesis in Cardiac Fibroblast Is via Epidermal Growth Factor Receptor Transactivation: Distinct PAR-1 Signaling Pathways in Cardiac Fibroblasts and Cardiomyocytes, 532
Signaling
Inhibition of Hypoxia-Induced Apoptosis by Modulation of Retinoblastoma Protein-Dependent Signaling in Cardiomyocytes, 782
Involvement of Extracellular Signal-Regulated Kinases 1/2 in Cardiac Hypertrophy and Cell Death, 776
Site-directed mutagenesis
Phorbol Ester Induction of Angiotensin-Converting Enzyme Transcription Is Mediated by Egr-1 and AP-1 in Human Endothelial Cells via ERK1/2 Pathway, 899
Skeletal muscle
Protease-Activated Receptor-2 Stimulates Angiogenesis and Accelerates Hemodynamic Recovery in a Mouse Model of Hindlimb Ischemia, 346
Skeletal muscle blood flow
Erythrocyte and the Regulation of Human Skeletal Muscle Blood Flow and Oxygen Delivery: Role of Circulating ATP, 1046
Slow conduction
Localization of Sodium Channels in Intercalated Disks Modulates Cardiac Conduction, 1176
SM22α
Cell-Specific Regulatory Modules Control Expression of Genes in Vascular and Visceral Smooth Muscle Tissues, 1151
Smooth muscle
1α,25-Dihydroxyvitamin D_3 Induces Vascular Smooth Muscle Cell Migration via Activation of Phosphatidylinositol 3-Kinase, 17
Evoked and Spontaneous Purinergic Junctional Ca^{2+} Transients in Rat Small Arteries, 454
New Roads Leading to Ca^{2+} Sensitization, 83
Nicotinic Acid Adenine Dinucleotide Phosphate Mediates Ca^{2+} Signals and Contraction in Arterial Smooth Muscle via a Two-Pool Mechanism, 1168
Osteopontin Plays an Important Role in the Development of Medial Thickening and Neointimal Formation, 77
Phosphatidylinositol 3-Kinase: A Key Regulator of Vascular Tone?, 273
Regulation of Smooth Muscle Cell Differentiation by AT-Rich Interaction Domain Transcription Factors Mrf2α and Mrf2β, 382
Smooth muscle cell replication
Matrix Metalloproteinase-9 Is Necessary for the Regulation of Smooth Muscle Cell Replication and Migration After Arterial Injury, 845
Smooth muscle cells
Both Donor and Recipient Origins of Smooth Muscle Cells in Vein Graft Atherosclerotic Lesions, e13
Diverse Origin of Intimal Cells: Smooth Muscle Cells, Myofibroblasts, Fibroblasts, and Beyond?, 652
Reduced Apoptosis and Increased Lesion Development in the Flow-Restricted Carotid Artery of $p75^{NTR}$-Null Mutant Mice, 494
Vitamin D_3-Upregulated Protein-1 (VDUP-1) Regulates Redox-Dependent Vascular Smooth Muscle Cell Proliferation Through Interaction With Thioredoxin, 689
Sodium current
Localization of Sodium Channels in Intercalated Disks Modulates Cardiac Conduction, 1176
Sodium-calcium exchange
Increased Exchange Current but Normal Ca^{2+} Transport via Na^+-Ca^{2+} Exchange During Cardiac Hypertrophy After Myocardial Infarction, 323
Na^+-Ca^{2+} Exchange Activity Is Localized in the T-Tubules of Rat Ventricular Myocytes, 315
The Ca^{2+} Synapse Redo: A Matter of Location, Location, Location, 276
Sphingolipids
New Roads Leading to Ca^{2+} Sensitization, 83
Sphingosylphosphorylcholine Is a Novel Messenger for Rho-Kinase-Mediated Ca^{2+} Sensitization in the Bovine Cerebral Artery: Unimportant Role for Protein Kinase C, 112
Sphingosine 1-phosphate
Comparison of Sphingosine 1-Phosphate-Induced Intracellular Signaling Pathways in Vascular Smooth Muscles: Differential Role in Vasoconstriction, 151
Spingosylphosphorylcholine
Involvement of Src Family Protein Tyrosine Kinases in Ca^{2+} Sensitization of Coronary Artery Contraction Mediated by a Sphingosylphosphorylcholine-Rho-Kinase Pathway, 953
Spontaneously hypertensive rats
Inactivation of Enhanced Expression of G_i Proteins by Pertussis Toxin Attenuates the Development of High Blood Pressure in Spontaneously Hypertensive Rats, 247
Src family protein tyrosine kinase
Involvement of Src Family Protein Tyrosine Kinases in Ca^{2+} Sensitization of Coronary Artery Contraction Mediated by a Sphingosylphosphorylcholine-Rho-Kinase Pathway, 953
Stem cells
Derivation and Potential Applications of Human Embryonic Stem Cells, 866
Stem Cells for Myocardial Regeneration, 1092
Stent
Physical Training Increases eNOS Vascular Expression and Activity and Reduces Restenosis After Balloon Angioplasty or Arterial Stenting in Rats, 1190
Steroid hormones
1α,25-Dihydroxyvitamin D_3 Induces Vascular Smooth Muscle Cell Migration via Activation of Phosphatidylinositol 3-Kinase, 17
Sterol regulatory element binding proteins
Role of Sterol Regulatory Element Binding Proteins in the Regulation of $G\alpha_{i2}$ Expression in Cultured Atrial Cells, 32

Stress response
c-Jun N-Terminal Kinase Activation Mediates Downregulation of Connexin43 in Cardiomyocytes, 640
Stunned myocardium
Dissociation of Regional Adaptations to Ischemia and Global Myolysis in an Accelerated Swine Model of Chronic Hibernating Myocardium, 970
Stunning
Hibernating Myocardium: New Answers, Still More Questions!, 863
Sudden death
Brugada Syndrome: A Decade of Progress, 1114
Leaky "Feet" and Sudden Death, 181
Progressive Increases in Complexity of T-Wave Oscillations Herald Ischemia-Induced Ventricular Fibrillation, 727
Superoxide
Angiotensin II Signaling in the Brain: Compartmentalization of Redox Signaling?, 982
Increased NADPH Oxidase Activity, gp91phox Expression, and Endothelium-Dependent Vasorelaxation During Neointima Formation in Rabbits, 54
Nitrated Lipids: Defining Their Bioactivity, 371
Rac-Dependent Monocyte Chemoattractant Protein-1 Production Is Induced by Nutrient Deprivation, 798
Superoxide anion
Chronic Hypoxia Increases Endothelial Nitric Oxide Synthase Generation of Nitric Oxide by Increasing Heat Shock Protein 90 Association and Serine Phosphorylation, 300
Superoxide dismutase
Increased Superoxide and Vascular Dysfunction in CuZnSOD-Deficient Mice, 938
Regulation of the Brain's Vascular Responses to Oxygen, 1031
Sympathetic nerves
nNOS-Containing Perivascular Nerves: Stranger by the Minute, 7
Sympathetic-parasympathetic interaction
α_7-Nicotinic Acetylcholine Receptors on Cerebral Perivascular Sympathetic Nerves Mediate Choline-Induced Nitrergic Neurogenic Vasodilation, 62
Syncope
Absence of Calsequestrin 2 Causes Severe Forms of Catecholaminergic Polymorphic Ventricular Tachycardia, e21

T

T-tubules
Na^+-Ca^{2+} Exchange Activity Is Localized in the T-Tubules of Rat Ventricular Myocytes, 315
T-wave alternans
Progressive Increases in Complexity of T-Wave Oscillations Herald Ischemia-Induced Ventricular Fibrillation, 727
Tachycardia
Absence of Calsequestrin 2 Causes Severe Forms of Catecholaminergic Polymorphic Ventricular Tachycardia, e21
Telokin
Cell-Specific Regulatory Modules Control Expression of Genes in Vascular and Visceral Smooth Muscle Tissues, 1151
Tensegrity
Mechanical Signaling and the Cellular Response to Extracellular Matrix in Angiogenesis and Cardiovascular Physiology, 877
Thick filaments
Structure-Function Relationships in Myosin Binding Protein-C: Taking Off the Blinders and Collaring Hypertrophic Cardiomyopathy, 656
Thirst
Superoxide Mediates the Actions of Angiotensin II in the Central Nervous System, 1038
Thrombin
Protease-Activated Receptor-1-Mediated DNA Synthesis in Cardiac Fibroblast Is via Epidermal Growth Factor Receptor Transactivation: Distinct PAR-1 Signaling Pathways in Cardiac Fibroblasts and Cardiomyocytes, 532
Thrombin-induced Ca^{2+} influx
Impairment of Store-Operated Ca^{2+} Entry in $TRPC4^{-/-}$ Mice Interferes With Increase in Lung Microvascular Permeability, 70
Thrombosis
Local Expression of C-Type Natriuretic Peptide Suppresses Inflammation, Eliminates Shear Stress-Induced Thrombosis, and Prevents Neointima Formation Through Enhanced Nitric Oxide Production in Rabbit Injured Carotid Arteries, 1063
Time-frequency analysis
Life Span of Ventricular Fibrillation Frequencies, 339
Tissue engineering
Derivation and Potential Applications of Human Embryonic Stem Cells, 866
Tissue inhibitor of matrix metalloproteinase
Tumor Necrosis Factor-α-Induced AT_1 Receptor Upregulation Enhances Angiotensin II-Mediated Cardiac Fibroblast Responses That Favor Fibrosis, 1119
Transcript profiling
DNA Microarrays: Implications for Cardiovascular Medicine, 559
Transcription
Gene Expression in Fibroblasts and Fibrosis: Involvement in Cardiac Hypertrophy, 1103
Transcription factors
Regulation of Smooth Muscle Cell Differentiation by AT-Rich Interaction Domain Transcription Factors Mrf2α and Mrf2β, 382
Transcriptional Control of Cardiac Allograft Vasculopathy by Early Growth Response Gene-1 (Egr-1), 135
Transcriptional regulation
Phorbol Ester Induction of Angiotensin-Converting Enzyme Transcription Is Mediated by Egr-1 and AP-1 in Human Endothelial Cells via ERK1/2 Pathway, 899
Transforming growth factor-β
PPARα Inhibits TGF-β-Induced β_5 Integrin Transcription in Vascular Smooth Muscle Cells by Interacting With Smad4, e35
Transgenic
JNK Bond Regulation: Why Do Mammalian Hearts Invest in Connexin43?, 556
Transgenic animal models
Structure-Function Relationships in Myosin Binding Protein-C: Taking Off the Blinders and Collaring Hypertrophic Cardiomyopathy, 656
Transgenic mice
Both Donor and Recipient Origins of Smooth Muscle Cells in Vein Graft Atherosclerotic Lesions, e13
Gene Dosage-Dependent Effects of Cardiac-Specific Overexpression of the A_3 Adenosine Receptor, 165
Transient receptor potential
TRPC4 Knockout Mice: The Coming of Age of TRP Channels as Gates of Calcium Entry Responsible for Cellular Responses, 1
Transposition of great arteries
Embryogenesis of Transposition of the Great Arteries: A Lesson From the Heart, 87
Hyperplastic Conotruncal Endocardial Cushions and Transposition of Great Arteries in Perlecan-Null Mice, 158
Transverse tubules
The Ca^{2+} Synapse Redo: A Matter of Location, Location, Location, 276
Trigger
Sarcolemmal K_{ATP} Channel Triggers Opioid-Induced Delayed Cardioprotection in the Rat, 186
Tropomyosin
Cardiac Dysfunction in Hypertrophic Cardiomyopathy Mutant Tropomyosin Mice Is Transgene-Dependent, Hypertrophy-Independent, and Improved by β-Blockade, 255
Troponin
Troponin I: In Sickness and In Health—and Normal Development, 449
Troponin I
Myofilament Calcium Sensitivity and Cardiac Disease: Insights From Troponin I Isoforms and Mutants, 525
p21-Activated Kinase Increases the Calcium Sensitivity of Rat Triton-Skinned Cardiac Muscle Fiber Bundles via a Mechanism Potentially Involving Novel Phosphorylation of Troponin I, 509
TRPC4 knockout
Impairment of Store-Operated Ca^{2+} Entry in $TRPC4^{-/-}$ Mice Interferes With Increase in Lung Microvascular Permeability, 70
β-Tubulin
Microtubule Involvement in the Adaptation to Altered Mechanical Load in Developing Chick Myocardium, 353

Tumor necrosis factor
Inflammatory Mediators and the Failing Heart: Past, Present, and the Foreseeable Future, 988
Tumor necrosis factor-α
Functionally Novel Tumor Necrosis Factor-α-Modulated CHR-Binding Protein Mediates Cyclin A Transcriptional Repression in Vascular Endothelial Cells, 307
Induction of Bone-Type Alkaline Phosphatase in Human Vascular Smooth Muscle Cells: Roles of Tumor Necrosis Factor-α and Oncostatin M Derived From Macrophages, 9
Tumor Necrosis Factor-α-Induced AT_1 Receptor Upregulation Enhances Angiotensin II-Mediated Cardiac Fibroblast Responses That Favor Fibrosis, 1119

U

Urokinase-type plasminogen activator
Gene Transfer of the Urokinase-Type Plasminogen Activator Receptor-Targeted Matrix Metalloproteinase Inhibitor TIMP-1.ATF Suppresses Neointima Formation More Efficiently Than Tissue Inhibitor of Metalloproteinase-1, 945

V

V-H^+-ATPase
SB 242784, a Selective Inhibitor of the Osteoclastic V-H^+-ATPase, Inhibits Arterial Calcification in the Rat, 547
Vagus
Neuronal Nitric Oxide Synthase Gene Transfer Promotes Cardiac Vagal Gain of Function, 1089
Vasa recta
Tubulovascular Nitric Oxide Crosstalk: Buffering of Angiotensin II-Induced Medullary Vasoconstriction, 487
Vascular biology
Alive and Kicking: Endothelium at the Geographic Nexus of Vascular Rejection, 1085
Vascular calcification
High-Density Lipoprotein Regulates Calcification of Vascular Cells, 570
Induction of Bone-Type Alkaline Phosphatase in Human Vascular Smooth Muscle Cells: Roles of Tumor Necrosis Factor-α and Oncostatin M Derived From Macrophages, 9
Vascular endothelial growth factor
Cyclophilin-Mediated Pathways in the Effect of Cyclosporin A on Endothelial Cells: Role of Vascular Endothelial Growth Factor, 202
Novel Role of $gp91^{phox}$-Containing NAD(P)H Oxidase in Vascular Endothelial Growth Factor-Induced Signaling and Angiogenesis, 1160
Novel Vascular Endothelial Growth Factor Binding Domains of Fibronectin Enhance Vascular Endothelial Growth Factor Biological Activity, 25
Vascular endothelial growth factor receptor 2
Cyclophilin-Mediated Pathways in the Effect of Cyclosporin A on Endothelial Cells: Role of Vascular Endothelial Growth Factor, 202
Vascular hypertrophy
Structure of Cerebral Arterioles in Cystathionine β-Synthase-Deficient Mice, 931
Vascular lesions
Reduced Apoptosis and Increased Lesion Development in the Flow-Restricted Carotid Artery of $p75^{NTR}$-Null Mutant Mice, 494
Vascular remodeling
Determinants of Notch-3 Receptor Expression and Signaling in Vascular Smooth Muscle Cells: Implications in Cell-Cycle Regulation, 999
Vascular smooth muscle
Angiotensin II Stimulation of NAD(P)H Oxidase Activity: Upstream Mediators, 406
Comparison of Sphingosine 1-Phosphate-Induced Intracellular Signaling Pathways in Vascular Smooth Muscles: Differential Role in Vasoconstriction, 151
Deficiency in ClC-3 Chloride Channels Prevents Rat Aortic Smooth Muscle Cell Proliferation, e28
Peroxynitrite Inhibits Ca^{2+}-Activated K^+ Channel Activity in Smooth Muscle of Human Coronary Arterioles, 1070
Proteome Analysis and Functional Expression Identify Mortalin as an Antiapoptotic Gene Induced by Elevation of $[Na^+]_i/[K^+]_i$ Ratio in Cultured Vascular Smooth Muscle Cells, 915
Vascular smooth muscle cells
PPARγ and Vascular Inflammation: Adding Another Piece to the Puzzle, 373
PPARα Inhibits TGF-β-Induced β_5 Integrin Transcription in Vascular Smooth Muscle Cells by Interacting With Smad4, e35
Vascular Inflammation Is Negatively Autoregulated by Interaction Between CCAAT/Enhancer-Binding Protein-δ and Peroxisome Proliferator-Activated Receptor-γ, 427
Vasculoprotection
Alteration in Endothelial Estrogen Receptor Expression: A Potential Key of Vasculoprotection by Estrogens?, 759
Vasoconstriction
Comparison of Sphingosine 1-Phosphate-Induced Intracellular Signaling Pathways in Vascular Smooth Muscles: Differential Role in Vasoconstriction, 151
Vasospasm
New Roads Leading to Ca^{2+} Sensitization, 83
Sphingosylphosphorylcholine Is a Novel Messenger for Rho-Kinase-Mediated Ca^{2+} Sensitization in the Bovine Cerebral Artery: Unimportant Role for Protein Kinase C, 112
Vein grafts
Accelerated Atherosclerosis and Calcification in Vein Grafts: A Study in APOE*3 Leiden Transgenic Mice, 577
Both Donor and Recipient Origins of Smooth Muscle Cells in Vein Graft Atherosclerotic Lesions, e13
Ventricular arrhythmias
Enhanced Basal Activity of a Cardiac Ca^{2+} Release Channel (Ryanodine Receptor) Mutant Associated With Ventricular Tachycardia and Sudden Death, 218
Ventricular fibrillation
Alternans Goes Subcellular: A "Disease" of the Ryanodine Receptor?, 553
Brugada Syndrome: A Decade of Progress, 1114
Life Span of Ventricular Fibrillation Frequencies, 339
Progressive Increases in Complexity of T-Wave Oscillations Herald Ischemia-Induced Ventricular Fibrillation, 727
Regional Differences in Ventricular Fibrillation in the Open-Chest Porcine Left Ventricle, 733
Ventricular myocytes
Inducible Expression of BNIP3 Provokes Mitochondrial Defects and Hypoxia-Mediated Cell Death of Ventricular Myocytes, 226
Spatial and Temporal Inhomogeneities During Ca^{2+} Release From the Sarcoplasmic Reticulum in Pig Ventricular Myocytes, 1023
Ventricular tachycardia
Brugada Syndrome: A Decade of Progress, 1114
Leaky "Feet" and Sudden Death, 181
Life Span of Ventricular Fibrillation Frequencies, 339
Viscoelastic properties
Microtubule Involvement in the Adaptation to Altered Mechanical Load in Developing Chick Myocardium, 353
Vitamin D
SB 242784, a Selective Inhibitor of the Osteoclastic V-H^+-ATPase, Inhibits Arterial Calcification in the Rat, 547

X

Xenotransplantation
Alive and Kicking: Endothelium at the Geographic Nexus of Vascular Rejection, 1085
Apoptosis and Cellular Activation in the Pathogenesis of Acute Vascular Rejection, 1135